



College AND UNIVERSITY Business

MARCH 1948: Safeguarding Funds ★ Successful Stores System ★ Visitors' Guides ★ Two Field Houses ★ Snack Bar ★ Simple Employment Procedures ★ Fire Protection



A NATIONAL ASSOCIATION OF BUSINESS OFFICERS? YES!

T. E. BLACKWELL

Treasurer, Washington University

THE NEED FOR A NATIONAL ASSOCIATION OF college and university business officers has been discussed pro and con for many years. The need increases with the years. The functions of business management in our colleges and universities are becoming increasingly complex, and our growing relations with governmental and national groups call for discussion and conference at the national level. This need has been met to date by informal group conferences and by joint committees. The manuals of procedure for war training contracts and for postwar governmental research contracts were ably negotiated and developed by informal representatives from our profession, but few would question the desirability of broader representation for future negotiations with governmental agencies.

The recent hearing before the congressional committee on ways and means on the demand of certain groups that the business activities conducted by colleges be taxed is but the most recent example of the need for prompt and effective action with full national representation. A national association is the only answer. Our profession is the only one without such an organization. We are unique in this respect.

It is true that smaller group meetings permit us to get better acquainted. We all rightly value the personal contact, the quiet discussion with a friend between sessions. Frequently the information thus exchanged is of more value than are the formal papers read at the meeting. These friendly contacts should not be sacrificed.

However, this is one country and not a regional confederation of states, and we should have an organization or federation at the national level to represent our profession and to serve the nation. The fiscal problems of higher education in this complex postwar world cannot be discussed and solved on a regional basis. We need to meet and know our colleagues from coast to coast. Those of us from the endowed universities need to discuss our mutual problems with the business officers of the tax-supported institutions. Ten or fifteen years ago our problems were quite dissimilar, but today many state controlled institutions have endowed institutions. We are all faced with the documents rivaling in size those of our larger problems of contractual relations with governmental agencies.

There is no reason why our present regional associations need not continue in their present form indefinitely, with regular annual meetings. However, once every four or five years we should meet as a national federation. A national executive committee, composed of the officers of the regional associations, would promote unity of purpose and action.

If our regional groups do not come together, we shall continue to be ignored when national committees are appointed to study the broader aspects of higher education. It is significant that the committees are appointed to study the broader aspects of the President's Commission on Higher Education, which recently released its report, did not include a member of our group.



College AND UNIVERSITY Business

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MICHAEL RADOCK

MICHAEL RADOCK, director of public relations and associate professor of journalism at Kent State University, has shown an interest in public relations since early student days. A graduate of Westminster College in Pennsylvania, he has a master's degree in journalism from Northwestern University and five years' experience on daily and weekly Pennsylvania newspapers to his credit. He is the originator of the annual Institute for

Public Relations at Kent State University, a two-day conference for executives held each June. Hobbies: photography and travel.



E. TODD WHEELER

E. TODD WHEELER is an associate architect of the University of Illinois and director of planning for the Medical Center Commission of Chicago. His specialty of institutional consultation work takes him from Washington to Texas and Mexico, in addition to his work in Chicago and the Midwest. He was a partner in a private architectural firm for a six year period, prior to accepting his present appointment. He collects maps

and paints in oil and water color; for music, he chooses Sibelius; for dining, artichokes. His family consists of "one wife, one daughter, two cats, three kittens."



MARGARET E. TERRELL

MARGARET E. TERRELL, professor of home economics and director of dining halls at the University of Washington, has been successively a school principal, a superintendent of schools, an assistant director of dining halls at Yale University. She went to Seattle in 1928 as director of university dining halls. Miss Terrell is famed for the graduate dietitian training course she founded at the university fourteen years ago.

Under this plan, men and women interns receive both classroom and practical experience in the University Commons, coffee shop and women's residence hall dining rooms. Lunchrooms in various industrial concerns in Seattle are used as "proving grounds" for intern training, and in 1938 her students planned and operated a dining room at the Western Washington Fair where they served more than 10,000 meals a day. In addition to membership in many professional organizations, she writes many articles on professional subjects.



DONALD S. WILLARD

DONALD S. WILLARD, purchasing agent and assistant to the comptroller at Mount Holyoke College, had wartime experience as a navy supply and disbursing officer. An avid sportsman, he inclines toward sailing, swimming and tennis. Before the war he was a student at the University of North Carolina and subsequently obtained a master's degree in business from the Harvard Graduate School of Business Administration.

... ARLYN C. MARKS, director of nonacademic personnel at the University of Iowa, wrote his doctor's thesis on personnel work, and prior to his present position served as assistant director of the nonacademic personnel at the University of Illinois. When not working, he tries his hand at duplicate bridge and handball.

Looking Forward

Before You Borrow

COLLEGES AND UNIVERSITIES DERIVING THEIR FINANCIAL support from state legislative appropriations have been under extreme pressure to meet the student enrollment deluge. Because of their tax support status, it has been difficult for such institutions to restrict their enrollment. For many of them it has meant that such state universities and colleges must get into the business of providing residential facilities for their students—for some institutions the first time that such a program has been carried forward on a large scale.

State legislatures have been reluctant to vote funds for colleges and universities for facilities that cannot be interpreted as direct instructional or academic facilities. This makes difficult the financing of residential and feeding facilities, as it involves the principle of debt financing for state colleges and universities.

Within recent months a book entitled "Debt Financing of Plant Additions for State Colleges and Universities" has been published by the Purdue Research Foundation. Co-authors of the book are Dr. R. B. Stewart, vice president and controller of Purdue University, and Roy Lyon, investment officer of the Research Foundation.

This volume has been intended as a guide to college and university officers in their borrowing problems. It presents a comprehensive history of past bond issues of higher educational institutions, presents a documentary account of judicial interpretation of constitutional debt provisions, and suggests methods of obtaining legislative approval.

Expensive Policy

THE SUPREME COURT DECISION IN THE CASE OF Ada Lois Sipuel Fisher, a Negro woman who sought admission to the law school of the University of Oklahoma, has significant implications for those states maintaining racial segregation statutes on their books. The court's ruling that equal educational facilities must be provided for Negroes or that they be admitted to institutions already established hits a sensitive nerve—the pocketbook nerve.

Those states involved face two choices: the establishment of equal educational facilities for Negroes at tremendous cost to the taxpayer or the admission of those students to institutions already

operating. The latter course requires no additional appropriation.

The average American feels that he knows what a dollar is worth; he is not overanxious to part with what he has in the form of additional taxes.

The state of Texas has already discovered the expense of setting up a separate law school for Herman Swett, Negro. The state of Oklahoma is now faced with the same possibility of additional appropriations. A regent has suggested accepting Negro graduate students in the University of Oklahoma in order to save the state's monies. Some time ago the state of Missouri obligated itself to the maintenance of separate law school facilities at Lincoln University instead of utilizing the University of Missouri Law School.

Speaking on the Missouri situation, the *St. Louis Dispatch*, as reported in *Time Magazine*, said: "It costs only \$228 a year to educate each white law student at the University of Missouri. But the state must pay \$807 for each law student in the separate school—and the forty-four Negroes still don't get really equal education. Admitting Negroes to University of Missouri graduate schools . . . was the 'one best way' to correct an 'expensive error.' "

An encouraging development is that this expensive policy is not reflected in the attitude of the white students involved. At the University of Oklahoma a large majority of the students voted in favor of Ada Lois Sipuel Fisher being admitted as a graduate law student. Graduates of southern colleges have attended northern universities where Negroes are enrolled with no disastrous consequences. At the latest Cotton Bowl football game the Southern Methodist football team willingly played in the game in which Negroes on the Penn State team participated. All intercollegiate student conferences of the Y.M.C.A. in the South are now conducted on an interracial basis with no particular difficulties evident. Not earth-shaking developments, it is true, but indicative of a ray of hope for the future!

In commenting on Negroes in higher education the *New York Times* recently editorialized that "there could hardly be a better place to eliminate a differential in the treatment of the Negro than at the place where education is supposed to shed its greatest light."



- Show the visitor a campus map or, better still, give him a map.

"CIRCLES OF CONFUSION," A PHOTOGRAPHIC term, is perhaps the best graphic description of the maze in which the occasional visitor finds himself on the average American college or university campus.

Colleges are expanding greatly. Everywhere new buildings are being constructed and temporary structures are going up. Faculty and staff expansion and booming student enrollment make up a bewildering scene, confusing even to those who are a part of the picture, let alone to those who may be only casual visitors.

LOST ON THE RANGE

The simple fact is that the average visitor to the college campus cannot find his way around.

He sees no place to park his car. He can't discover the proper building or dormitory. When he does know the name of the individual he is seeking, he is unable to determine the location of his office or room.

He asks a student, who merely shrugs his shoulders. A campus employe points vaguely to the northeast section of a 200 acre region. A professor, who admits he has been "around here some twenty-five years," still "never heard of the man."

The visitor becomes discouraged, disgruntled, angry. Embittered, he

finally leaves the campus without transacting his business. A public relations blunder has been committed. A potential friend has been lost. Perhaps he was a prospective student, a prominent alumnus, a donor, a state legislator. He may have been only a taxpayer, a stockholder, if you please, in your state university.

Too often college administrators, concerned with what they feel are more significant tasks of building new dormitories, remodeling old halls, finding hard-to-get equipment, lose sight of the basic day-by-day contacts with the public.

One of the nation's leading public relations authorities, Glenn Griswold, editor of *Public Relations News*, recently told a meeting of college public relations directors that administrators in the field of education must adopt some of the methods employed by industry in establishing a wider public appeal.

"Most administrators in education," Mr. Griswold contended, "have failed to discover what business began to understand thirty years ago, namely, that all organizations must rest on public understanding and that they succeed or fail according to the public attitudes."

Pointing out that present-day education is "big business," Mr. Griswold declared that the administrative depart-

CIRCLES OF

MICHAEL RADOCK

ments of many colleges fall short in their dealings with "common folks whose wisdom and whim determine the economic future of our school system."

One of the first needs for any college or university in its dealings with the public is a centralized, efficiently operated information bureau. This office should be located in the building likely to draw most visitors, usually the main administration building.

Preferably, the receptionist in charge should be an attractive woman who has had some experience in meeting the public. She should possess the same qualifications that might be required in a similar position in a business or professional office. Do not place in this important post an employe who is too old or inefficient for other offices.

GUIDE TO THE GROUNDS

The information bureau should be equipped with the usual office furniture and must have a telephone so that the receptionist can arrange interviews and appointments. Other equipment may include such informational data as student and faculty directories, college catalogs, diagrams and maps of the campus and city, floor plans of large buildings, and anything else which may make it easier for the attendant to help the visitor find his way around the campus.

Some colleges find it necessary to combine the information office with the main switchboard office or the central mail room. The danger inherent in such combinations is that too often the informational aspect or duty is slighted.

Going a step farther, colleges might well, as Mr. Griswold suggested, adopt some of the methods and means successfully tested by business and industry in public relations programs.

Confusion FOR CAMPUS VISITORS

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Kent, Ohio

An excellent example is the visitor's booklet prepared for distribution by receptionists to all visitors, including potential customers, salesmen, dealers, visiting delegations, and others.

For college use, a modest booklet or folder may be prepared at little expense. It is recommended that the publication, first of all, be written in a simple, easy to read, non-academic style, unlike college catalogs and bulletins. Some institutions may wish to decorate the booklet with photographs or drawings of campus buildings. These are not necessary. However, simple cartoons or sketches aid in illustrating the text.

IN CAMPUS BAEDEKER

Essentially, the visitor's guidebook may include the following information:

A brief statement of greetings from the college, indicating its interest in all visitors.

A list of important administrative officials most sought by visitors. These include the president, comptroller, business manager, purchasing agent, registrar, director of admissions, public relations director, and housing director. The location of each person's office should be included.

A map of the campus showing the location of all main buildings.

A map of the city. This may incorporate highway information concerning main routes leading into the city.

Essential information about transportation facilities, hotels, churches, eating places.

Pertinent facts about the college or university, its past and present. This should be very brief.

Interesting bits about the community or general area in which the school is located.

Some business guidebooks offer ad-

ditional information and services that may be incorporated into the college publication. One midwest firm offers a free supply of picture postcards (showing plant scenes). The visitor is invited to write as many as he wishes and to give them to the receptionist who will affix stamps and mail them. No charge is made.

Telephone facilities for local calls are offered without charge by the same company, which volunteers the services of the receptionist in getting hotel accommodations, checking train schedules, calling taxis, and otherwise aiding the guest.

It is wise to include information about the location of guest rooms, men's and women's restrooms and drinking fountains.

The administrator must remember that the information bureau and the guidebook alone will not solve problems of campus visitor relationships. These are only two steps in what must be a definite public relations program. Other specific recommendations are:

PUBLIC RELATIONS TECHNICS

1. Parking space for visitors. This should be so labeled and so used. One of the best ways to put a visitor in a bad mood is to make him walk ten blocks to get to the campus.

2. Identification of all buildings and offices. Names of too many ivy covered halls are known only to students and faculty members who use them.

3. Courteous staff members. Campus watchmen, maintenance workers, janitors, even faculty members and students, must be impressed with the necessity of cordial and courteous treatment of visitors and guests. Many well planned public relations programs, carefully followed on the top levels, fail because of the insolent conduct of minor staff members. A number of colleges carry on a "Hello" tradition that wins friends for the institution.

4. Enlightened staff members. A college can't expect guests to find their way around if students, faculty members and employees don't know their own campus. One venerable professor

at an Eastern college admitted that he had been around for sixteen years before he knew exactly where the college swimming pool was located. If the college has an employee's manual, a map of the campus should be included. One should be in the catalog and in the freshman handbook.

5. Guide service. Many colleges have set up guide services, manned either by students or by faculty members, to serve off-campus guests particularly during the late spring, summer and early fall seasons.

6. Campus bulletin boards. The large university, with a campus sprawling over several hundred acres, may find it convenient to set up bulletin boards at key spots around the campus. A feature of such boards should be a diagram of the campus indicating by some "X marks the spot" device, or shading, the area on which the visitor stands as he reads the board.

7. Guest book. A number of colleges, usually the smaller private schools, like to follow up visits to the campus. A guest book is provided in some prominent place where visitors may write their names and addresses. A college official then sends a letter to the guest, thanking him for the visit and inviting him to return at some later date.

8. Provisions for after-hours service. Visitors who may drive hundreds of miles to transact important business at a college often are disappointed to find all buildings locked and no one around to give directions. Campus watchmen should be instructed to guide guests to the proper individual when college offices are closed during week ends and holidays.

With the widespread interest in higher education created by the G.I. bill, college and university enrollments have skyrocketed. Translated in terms of face-to-face relationships, this statement means that more people, not only students but persons of all classes and occupations, are having their first association with the American college. Much of the future of higher education depends on whether this first meeting is a pleasant or a disagreeable one.

ADEQUATE SAFEGUARDS FOR COLLECTING

C. R. GILES

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THE SETTING UP OF ADEQUATE SAFEGUARDS for collecting and disbursing funds is based on certain fundamental principles of division of duties, formalized instructions and routine, and supervision.

However, there is no precise pattern that can be fitted to all types of enterprises. A business with many employees automatically has better control than one in which the office work is done by two or three persons. The controller of a manufacturing concern will have a system materially different in its details from that of a department store.

In establishing adequate controls over the university's funds, the business officer must give due recognition to the variations and peculiarities inherent in colleges and universities. Before going into the general subject of cash controls, let us consider some of these variations and peculiarities.

The educational institution should recognize that its very nature places on the business office the major portion of the function of adequate controls. The college is primarily a service organization, and its activities are not for the purpose of realizing profits. In commercial enterprises, however, revenues are produced by expenditures, resulting in a profit or a loss, and ordinarily there is a direct relationship between income and expenditures. Under such circumstances, the controller in an industrial concern can expect that the plant superintendent will currently watch his production costs in relation to units produced; the credit manager will investigate a slowing-up of cash collections, and the president will be vitally interested in knowing the reason why the gross profit on Product A went down 3 per cent last month. The industrial system of accounts and financial statements permits this to a greater degree than does that of the college.

Presented before the Western Association of College and University Business Officers, April 1947.

The educational institution may have an infinitely greater variety of functions than a commercial enterprise of the same size. Quite apart from the main job of accounting for the workings of an educational system, the business officer may also be the chief accounting officer responsible for adequate controls for:

1. Intercollegiate athletics. Here he has some of the problems of the theater manager. Does he have all the available controls peculiar to this field? For example:

Are football ticket applications processed promptly and is the cash deposited at once?

Could the ticket dispensing mechanisms common in a theater box office be used?

Are the safeguards available through metered turnstiles used?

Is there accounting control over printing of all tickets?

Are all tickets, once printed, accounted for?

Is the practice of complimentaries formalized in a routine and is the routine adhered to?

2. A hotel, i.e. dormitories, dining halls and cafeterias. Does the system in effect include the following safeguards:

Can housekeepers' reports of rooms and/or beds serviced be sent direct to the accounting office for comparison with recorded income totals? If this is not practicable or applicable, could there be a check with dormitory assignment records in the dean's office?

Are cash registers utilized to the full extent?

Is volume in dining rooms great enough to warrant the use of a food checker?

Is there numerical control over dining room checks for visitors?

3. A hospital. Here, one of the chief problems is that of determining that all of the many services furnished a patient are being collected for. The following suggest themselves:

A check of room billings against daily condition sheets made by head nurses.

A check of operating room fees against the operating room register which shows, usually by quarter hours, the schedule of operations for the day.

Numerical control over charge slips from pathological, x-ray and other laboratories.

Tuition is, of course, one of the major sources of income. There is nothing quite like it in a commercial enterprise. Its uniqueness lies in the fact that it is usually collected in advance, much of it is received in cash, and its collection is ordinarily not preceded by the issuance of a bill by the accounting department. Procedures should provide a control over the following possibilities:

1. A student manipulates his registration in such a way that he can attend classes and obtain grades, and ultimately a degree, without paying tuition fees.

2. Assuming that the foregoing is impossible because the registrar will not give out grades unless he has received due notice of tuition fee collection from the business office, an accounting clerk pressed into temporary cashier duties on registration day pockets a student's fee, which is in the form of currency, but still keeps the record of tuition fee collection on its route to the registrar.

3. May someone in the registrar's office establish records giving his cousin a free college education?

The educational institution has a major problem in the matter of gifts. The following procedures are suggested.



AND DISBURSING INSTITUTIONAL FUNDS

Any system needs constant supervision and review

1. If the college or university has a separate fund-raising or soliciting organization or committee, it should furnish the accounting department currently with information relating to prospective gifts, inclusion in wills, commitments by foundations, and the like.

2. A gift in cash should be entered and deposited at once. How many instances come to your mind of a check going from one person to another for an indefinite period while attempts are being made to determine the purpose of a gift and the account to which it should be credited?

3. A multi-copy receipt form should be prepared as the gift is recorded and copies distributed as follows: (a) one to the secretary of the board of trustees for formal recording in the minutes; (b) one or more to the president, for acknowledgment and filing; (c) one to the fund-raising organization or committee for posting to its records; (d) one or more copies for accounting use.

Investment income is usually of sufficient importance to the university or college to warrant procedures for regularly accruing such income, particularly interest and rents, in the accounts currently, rather than taking it up on a cash basis. Dividend income ordinarily will be taken up on a cash basis, and the annual income should be checked with one of the printed dividend summaries put out by various investment services.

The university business officer should have in effect special procedures to assure receipt of all collections on student loans. He ordinarily has no credit manager, and the general policy of the institution may be one of leniency and no pressure. The general rules of business, such as the statute of limitations, are not particularly applicable, as witness the numerous instances of collections on such loans many years after graduation. The business office should continue to exercise control and maintain contact through correspondence, after a student loan has been removed from the accounts as uncollectible.

The largest single class of disbursement by an educational institution is ordinarily pay roll. Would it be worthwhile for someone in the business office, not engaged in any phase of pay roll preparation, personally to distribute all pay checks, say in the month of May, and thus verify the existence of all persons listed on the pay roll? If personal distribution is not feasible, direct mailing is suggested.

In spite of differences and special conditions such as the foregoing, there are



certain sound and fundamental principles of cash control applicable to all effective accounting systems.

How well safeguarded are the funds of any organization, profit or nonprofit, depends upon the efficient and complete functioning of the following: (a) the system of internal check as incorporated in the accounts and office procedures; (b) internal audits; (c) independent audits.

The following comments are limited to a discussion of the first named. I should like first, however, to quote some authorities on the interrelation of all three.

From the report of the special committee on terminology of the American Institute of Accountants:

"Internal Check: A system under which the accounting methods and details of an establishment are so laid out that the accounts and procedures are not under the absolute and independent control of any one person; on the contrary, that the work of one employee is complementary to that of another, and that a continuous audit of the business is made by employees.

"Internal Audit: The term refers to an audit made by members of the concern 'audited.' Frequently 'staff auditors,' 'traveling auditors' or 'inspectors' are employed to make continuous or periodical audits of some or all of the transactions. The scope is not definite, and their work is frequently supplemented by examinations made by public accountants."

From "Auditing of Colleges and Universities" by J. Harvey Cain, published by the financial advisory service of the American Council of Education:

"The financial operations of every publicly controlled and privately controlled college are of sufficient importance to require periodic auditing. . . . An independent audit guards against serious forms of laxity and dishonesty and has a tendency to improve order and budgetary control. . . . The auditor should carefully examine and evaluate the system of internal control within the college organization. A proper internal audit system which is carefully and intelligently administered is one of the surest ways of safeguarding the college's finances."

One of the first steps in safeguarding cash receipts is to get some positive record of them as soon as received. Recording them establishes accountability; thus it is essential that the record be made promptly. In the case of mail remittances, the person opening the mail should make the record and turn the record over to the accounting department and the remittances over to the cashier. If the cashier is the first person to receive the cash, the record should be either a receipt form in duplicate or registration on a cash register or other mechanical device.

An important part of recording is the valuable publicity feature that can accompany it. A cash register rung up in front of the person who has just paid out some hard-earned cash is one of the most effective deterrents to shortages ever devised. Of somewhat comparable

value is the practice of always giving a serially numbered receipt form.

All cash receipts should be deposited intact. It may seem unnecessary at times to maintain a separate cash fund for cashing checks for accommodation when the current day's receipts contain plenty of currency for such purpose, but one cannot overlook the potential danger of ever permitting any substitutions of cash receipts. As a record and source of proof that cash receipts are being deposited intact, there should be a requirement that the deposit ticket be made up in duplicate, with a copy to be signed by the bank and sent direct to the accounting or auditing department, where its composition can be compared from time to time with cash receipts detail.

All cash receipts should be deposited daily. It is a simple rule (and one that can be followed up and verified easily by reviewing the credits on the monthly bank statements) to require that every day at 2 p.m. (or some other established time) the receipts for the preceding twenty-four hour period be deposited. There are, of course, a number of advantages in such a rule in addition to that internal check, e.g. the reduced burglary hazard. The matter of prompt deposit of collections should be given special attention at outlying or branch collection points, such as athletic departments and bookstores.

The function of receiving cash should be centralized to the greatest degree possible. When many individuals receive cash, the cash collection may be a sideline to other activities, and the chance of error or laxity is greater.

Persons receiving cash should not have access to regular accounting records. Cashiers should do no further accounting than the preparation of reports summarizing the cash transactions. All persons handling any phase of cash work should be required to take annual vacations.

All checks received should be made payable to the institution (prominently displayed signs in the cashier's office help), and depositaries should be instructed to accept such checks for deposit only.

Just as it effects better control for the bank to report the amount of the daily deposit, by means of the duplicate deposit ticket, to the accounting or auditing department, it is also good practice to have the bank report direct to the accounting department on any charge-

backs for bad checks, uncollected drafts, or the like.

Transfers between banks should be systematic. Withdrawals from branch depositories, e.g. a bank in which athletic department or hospital receipts are deposited, should be restricted to transfers to central disbursing banks and preferably should be on an automatic remittance basis.

Disbursements should be made by checks to the fullest degree possible. Disbursements from petty cash funds should be scrutinized from time to time to determine whether certain regular disbursements could not be handled just as well by check.

Authorized signatures should be given continuing attention. Banks should be notified promptly when someone on the authorized signature list is



removed from the pay roll. The use of signature dies requires careful control. Double signatures on checks are of less value than one signature if the first is made on blank checks because the person will not be available later for signing. It is possible that the second signature may be affixed on the assumption that the purpose of the disbursement was closely scrutinized by the first signer.

The form and use of checks should be given attention. Protective paper should be used. There should be full and complete accounting for numerical sequence. The completed checks should be mailed direct by the signer to the named payees. Voucher data supporting the disbursement should always accompany the check to be signed, and the check signer should examine such data before signing.

Minor manipulations of petty cash funds are quite often the start of major irregularities, and the following matters should be given consideration:

1. Is the fund sufficiently minor and restricted to personal disbursements that the custodian may merge it with his personal funds? If so, there should be periodic reminders of ownership of the fund by requesting the custodian to acknowledge it.

2. If the fund is large enough to war-

rant placing a part of it in a bank account, it should be formally established with the bank that it is an institutional fund, and the monthly bank statements should be sent direct to the accounting office.

3. Is there a rigid rule regarding IOU's and personal checks in the fund?

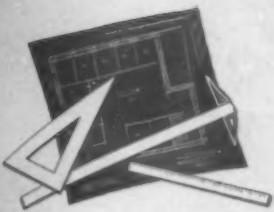
4. Are petty cash reimbursement vouchers carefully reviewed as to completeness and authorizations?

DISBURSEMENT SUPPORT

All disbursements should be supported by complete and appropriate documentary evidence. An invoice for material should have associated with it the related purchase order and evidence of receipt of the material or appropriate entry on the invoice itself that there had been this association. All voucher data should be effectively canceled, e.g. with a perforating device cutting the voucher reference in the paper at the time of payment to avoid the possibility of reuse.

Bank statement reconciliation work should be done by a person who is connected with neither cash receipts nor cash disbursement details. He should receive the bank statement direct. The reconciliation work should be done currently; otherwise recoveries on account of irregularities may be denied by the courts. Endorsements should be scrutinized. The actual mechanics of bank reconciliation are important. A backward reconciliation, i.e. listing missing check numbers from the numerically arranged paid checks and related amounts, is faster than checking the paid checks against the cash disbursements detail and listing outstanding from the latter, but it will not disclose checks payable to others than the names shown on the cash disbursement detail. Also, it is faster to check paid checks against a check register than against the actual voucher detail, but from time to time the latter procedure should be followed. All bank transfers should be carefully checked to determine that there are simultaneous deposit and withdrawal entries for each transfer.

As previously mentioned, the foregoing general principles will apply, in varying degree of course, in all types of enterprises, profit or nonprofit. In conclusion, it cannot be too strongly emphasized that the most carefully conceived and complete system of internal check needs constant supervision and review to keep it functioning.



"IT'S EASY TO BUILD"

Architect's relation to total building program

These three letters from the files of E. Todd Wheeler, architect, written by one business manager to another, relate to a problem many university officials are now facing, the architect's relation to the total building program. Mr. Wheeler is associate architect for the University of Illinois Professional Colleges, director of planning, Medical Center Commission, Chicago, and a consultant on educational buildings and hospitals.—ED.

Dear Jim:

I was delighted to get your letter telling about your plans for a new science building and even more pleased to learn that you are to be responsible for seeing the project through.

I'll never forget the first building project I shepherded. That was an addition to our library, and it taught me plenty. There were times when I thought the world was conspiring to make trouble for me, but in the end we came out with a good building and within our budget.

In the first place our needs were pretty clearly defined, and the librarian had informed himself on building procedures at least enough to be intelligent. That saved time. Then we had enough money so we didn't have to trim it to the bone, no luxuries, you understand, but enough for a good job and we got a good builder in on it, a fellow who was interested in the university as well as the money.

However, I think actually the fact that we had a good architect was what made it bearable for me. Our man was professionally capable, as most architects are, but the quality I really valued was his open-minded and imaginative approach to our problem. He had lots of ideas but was still willing to take some of mine.

Be sure you have a clear understanding with the architect as to the basis of his service. Most architects charge

the standard professional fees (usually 6 per cent of the contract costs), as approved by the American Institute of Architects. Occasionally, they will ask additional compensation for special work but that can always be discussed.

I remember in our first session with him, the architect outlined the steps we would probably follow in carrying out our project. First he said that fundamentally there are only three parts to a building project: program, design and construction.

Program means putting down all your requirements so they will be fully understood by all concerned. (It ain't easy so don't be fooled by that one.)

Design starts early with the layout of functional units and doesn't really end until the last coat of paint is on. Most of the design, however, is completed before the working drawings and specifications are done. Remember, this building of yours is the only one of its kind. Other science buildings have been built, but there isn't one that will meet your exact needs. I hope you will study other buildings but don't make the mistake of thinking that all you have to do is get a good set of blueprints of some other building and give them to a builder. It doesn't work that way.

There is something formative about putting ideas on paper and seeing them tested in a space analysis. The third angle I mentioned is construction, which starts with taking bids and letting contracts and ends with final payment. You will find there are guarantees for a year on much of the work, and you will want to set these up for a come-up to take care of your maintenance responsibility.

During this period the architect arranges the bidding, recommends a contract award, prepares contracts for signature, supervises construction and certifies to you progress payments as

they become due. Our architect gave us a detailed development of this simple outline which I enclose.

As you can readily see from this outline, building is a simple thing. Nothing to it. You simply put one brick on top of another until the wall is complete (Woops, I forgot the mortar). Primitive peoples with little more education than you and I learned to build. The Egyptians did pretty well 6000 years ago (or was it three?). No magic to it. Simple. All you have to do is to know what you want to build and go ahead and do it.

Early in the game you start listing the buildings you need and the rooms you need. If you are wise you will also start a list of the people who will be using them and will write down a description of what those people will be doing in them. Then you figure the important work is all done and all you need is a good draftsman to draw it up, so you call in your architect and give him the "go" sign to start making working drawings. Oddly enough, almost at once you will find out that your list of buildings and rooms and your careful description of their expected use are incomplete. Now how could you have forgotten an office for the dean? But you did, and now you'll have to give him the first floor corner room originally intended for the chairman of the department.

But, after all, you're lucky because you called in your architect early. Most people think they have to wait until their ideas are all frozen before talking to the architect. Actually, if he's a good architect, he'll start out by trying to unfreeze them, so better save his time and yours and get him in early so he can tell you how the space problems are likely to affect your thinking on the program.

By now you probably have mental constipation with all the lists, charts and descriptions, so better give them

to your architect and ask him to go ahead with his unit diagrams. Our architect took each department or separate functioning division and planned a separate unit, without regard to general relationships, just to establish how much space was needed. He had a pretty detailed list of persons, equipment and functions for each such unit.

From what you say your preliminary analysis may not be that detailed, but with the architect's help you can fill in the parts he needs in order to determine size. A flow diagram, which is simply a drawing showing probable movement of people and goods through the department, is most helpful. Also rough diagrams sketched out by the architect showing essential working relationships between departments do a lot to clear your own thinking on how the place will operate.

Just between you and me, Jim, the president is the one who really should be doing all this, but everyone knows you do all his work for him anyway, eh? (Ha! Ha!)

Where was I? Oh yes, constipation! The point I am making, Jim, is that the architect can do a lot to help you in the early stages if you let him. He can help clarify the program, he really should be in on locating the building and he can get sizes of various departments in balance which relieves you of an awful headache because you

know how everyone asks for the Waldorf-Astoria when what they need is an office for two. So turn the stuff over to the architect and let him chew on it a while.

Write me again when you have time.

As ever,

Dave

Dear Jim:

I have your wire about jacking up the architect. Don't get impatient with him. If you call him once a day, that's enough. Remember he needs a little time to get acquainted with your problem and to mull things over. He'll come up with the answer soon enough.

As a matter of fact, from my knowledge of you, I'll wager that there are still some things you haven't told the architect that he should know. Even the things you think are inconsequential, like the fact that you are going to use this building night times and that the animal sections have to be air conditioned, should be given him right off. After all, he isn't a mind reader.

I mentioned in my last letter that the architect should help locate your building. Actually it would be well if you had him make a general study of your probable building needs for the next twenty years and locate not

only this building but all the others you are going to build. Of course, you must tell him first what are your anticipated educational needs for the planning period. His plan need not be thought of as final although the building study is sometimes laughingly called a "master plan," and while it is seldom followed, it gives you a fine feeling of efficiency to have a really good plan to deviate from. Such studies are usually done at cost plus an agreed profit, so ask your architect what fee he would charge.

You mention that the architect made some mistakes in laying out the botany offices and labs. Are you sure you told him they should be near the service entrance? I'll bet you forgot that and are using the architect as a scapegoat to cover up your own mistake. If so, better stop, and admit your error to him and the rest of your building committee. There is no faster way to alienate an architect than to make him feel you want to be boss with him handling the rubber stamp. After all, he isn't competing with you, so tell him all you know and treat him like a member of the team. One or two more situations like that and you'll find things dragging even more than you imagined was possible.

In that outline I gave you, there was an item of a cost estimate. Just as soon as preliminaries are completed, get that done. You may have to ask for it a couple of times but keep after it, and when you get it tie the whole thing down. Make your academic people sign the preliminaries and understand their relation to the budget. If you don't, you'll have constant growing pains and what I mean it is painful when you outgrow the budget.

Sorry I have to knock off, but here comes the day's mail.

Yours,

Dave

Dear Jim:

At last you are on the way with contracts let and excavation started. You may consider yourself lucky in these times that bids came anywhere near estimates and the fact that you have postponed only two rooms of laboratory equipment means you are actually set to go.

On our job there were several things which came up that it might help you to know. In the first place, I had thought the architect would have a

THREE STEPS IN BUILDING

PROGRAM (worked out by whole planning team)

1. A full statement of educational needs and justification for the building.
2. Estimated space needs in kind and size. Number of people using it and extent of equipment; functional relationships, full description of activities to be carried on. Organization charts, lists of personnel, general character desired. All this in full detail.
3. Selection of site: ground coverage, zoning, relation to other buildings, requirements of master plan.
4. Determination of budget, method of raising funds, preparation of presentation material.

DESIGN (largely work of architect)

1. Layout sketch plans of separate functioning units.
2. Determination of basic structure of building and other physical limitations.
3. Preliminary sizing and shaping of building. Rough cost estimate.
4. Site study, relation to other buildings, master plan.
5. Preliminary plan layouts, floor by floor, with criticism by staff until an agreed solution is reached.
6. Exterior design.
7. Specification outline; review of all materials and equipment with building committee.
8. Verification of cost estimate.
9. Working drawings, detailed design and specifications.

CONSTRUCTION (architect's responsibility on contractor's work)

1. Taking bids.
2. Awarding contracts.
3. Supervising construction.
4. Certifying payments.
5. Follow-up.

man on duty full time to supervise construction. Don't tell my boss this, but if I had read the contract with our architect carefully I would have seen that he does not furnish full-time supervision unless requested and paid for by the owner. Actually the architect's supervision is more valuable in interpreting drawings and helping the contractor avoid mistakes than it is in playing watch dog, though that is also part of it.

Our architect had his regular field superintendent visit the job once a day and during intense activity he was there at least half the time. Better ask your architect now how much supervision time he thinks will be needed and have an informal understanding on that point. If you should go into a cost plus operation, I think you will need to have a full-time supervisor. He is called clerk of the works, and his salary is paid by you in addition to the regular architect's fee. He reports to the architect, however.

Then about extras. Oh boy! They are the cause of most grief. They usually come because someone made a mistake or changed his mind, and the determination of who pays for extra work depends entirely on who is responsible for the change.

Some things like special foundation trouble such as quicksand can't always be foreseen and when encountered are usually taken care of as needed, with the extra work paid for by the owner. Always remember the owner is the one who is the responsible party in the final analysis. The contractor's responsibility is great and well defined but is limited by the terms of his contract. The architect's responsibility is also well defined but is a professional, not a contractual, responsibility.

The owner, bless his heart (and that's you in this case), is responsible for his property from beginning to end and can be sued for damages at any time. That's why the architect specifies insurance during construction naming you as well as the contractor and himself as the insured. The law requires workmen's compensation insurance, and you should see that someone takes out fire insurance on the property during construction.

Don't forget you are the fellow who has to maintain this building after it is done and while I'm on that point I found it a good idea to stress maintenance when we were selecting materials and equipment. Even the architect we had, and he was a good one,

CAUSE OF EXTRA WORK

1. Owner changes his mind
2. Contractor makes a mistake
3. Unforeseen conditions arise but covered in the contract
4. Unforeseen conditions arise not covered by the contract
5. Architect makes a mistake

WHO PAYS

Owner (that's simple)

Contractor (that should be just as simple but isn't always)

Whoever is supposed to, under the contract. May be either owner or contractor. If it is an act of God, the owner pays.

This becomes a matter for discussion and agreement or failing agreement, for adjudication. A.I.A. standard contract forms provide machinery for this.

Owner pays (or at least he should pay). The temptation for both architect and owner is to try to stick the contractor, but that ain't easy. Lots of grief in this one).

didn't think about that point with the same special interest that you and I have in it. You have to balance initial cost against cost of maintenance for the life of the material and see what comes out of that analysis. That's a detail but a pretty important one.

But I didn't mean to get off the question of extras. The most important point is that no extra work should be done without the owner's knowledge and consent. Even then, in giving consent, you, as owner, will need to judge who should pay for the work. Here is our experience (and our architect says this is the general practice).

About all that can be said on the last point is that the architect is the professional agent of the owner, just like a lawyer or doctor, and the architect's counsel in the form of plans and specifications becomes the property of the owner and hence the owner's responsibility when plans are carried out.

Remember the building contract is between you and the contractor and while the architect's plans and specifications are a part of the contract he himself is only an agent or, at the most, an arbitrator. He is not a party to the contract. When he makes a mistake he pays for it in loss of professional prestige and in the grief that follows.

To you and me it may seem that he should also pay for the cost of building changes, but if that were customary he would have to charge a larger fee to cover the risk and would in effect become a contractor. It would be as though you asked your lawyer

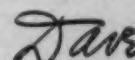
to pay part of a damage suit judgment because he lost the case or your doctor to pay the funeral expenses when he fails to make a cure. Both men would consider such payments unethical. So does the architect on a payment for an extra. It's a tough one but that's the way it is.

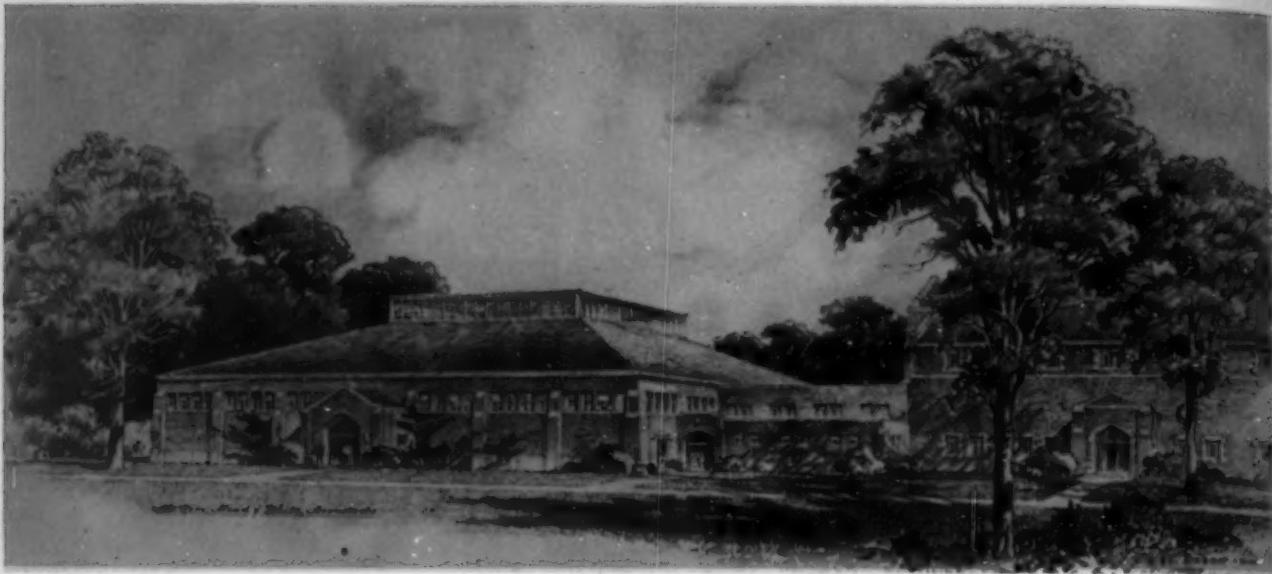
One other point and I'm through on this subject. After the building is completed and the architect has made his final inspection and issued certificates for final payments, some question or difficulties may arise. When they do, be sure to call in the architect. He wants to know how his buildings stand up and will do his part to see that the contractor's guarantees are properly carried out. Don't impose on him or expect him to have the contractor do your own maintenance work, but if you handle it right you will get a lot of good counsel and you should be able to continue a pleasant and profitable relationship.

If your architect has done a good job it is only fair that he should be given consideration when more work comes along. Remember, each time you go through a building operation with an architect you invest quite a lot in him not only in money but in your own time. Generally speaking, his understanding of you and your problems will enable him to do a better job the next time.

You have been very patient with all this advice from me, Jim. I hope it does some good.

Yours,





INNOVATIONS IN TRINITY

Field House

JOSEPH W. GETZENDANNER JR.

Treasurer, Trinity College

FACED BY AN URGENT NEED FOR ECONOMY of time, cost and materials, McKim, Mead & White, architects for Trinity College at Hartford, Conn., have designed a \$412,000 Memorial Field House and sports annex that incorporates several structural innovations.

A student body of 884 men living and exercising where 525 had lived before the war reemphasized the need for a field house to supplement a gymnasium built in 1887. President G. Keith Funston last year started a development campaign that is financing the field house and other urgently needed improvements. The building is scheduled for completion by next September.

To be dedicated to the 67 Trinity men killed in World War II, the building is attached to Trowbridge Memorial Building constructed fifteen years ago. Trowbridge contains a swimming pool, six squash courts still among the nation's finest, and locker and shower facilities for 285 men.

For the distant future, President Funston envisions a gymnasium attached to the opposite end of Trowbridge to give the college a well balanced indoor physical education plant.

Architecture is very modified Gothic to harmonize with other campus buildings. Brick faced and trimmed in limestone, the square building (163 feet 4 inches) is 25 feet high at the eaves and 55 feet high at the peak. The roof in the form of a truncated pyramid is topped by a 70 foot square monitor, the walls of which are completely of glass for a height of 6 feet 9 inches, for light and ventilation. These clerestory windows eliminate the use of skylights, which frequently leak.

Because of delays in structural steel delivery and the high cost of steel fabrication, the use of this material has been restricted to the framing of the field house roof alone. The architects and their engineers have designed the exterior walls of the field house as a skeleton frame of reinforced concrete.

There is a series of reinforced concrete columns joined at the top by a reinforced concrete girder and at the bottom by a concrete grade beam. In each of the four corners a heavy reinforced concrete buttress is tied at the top to the concrete girder and at the bottom to the grade beam and is arranged to carry the diagonal trusses of the roof.

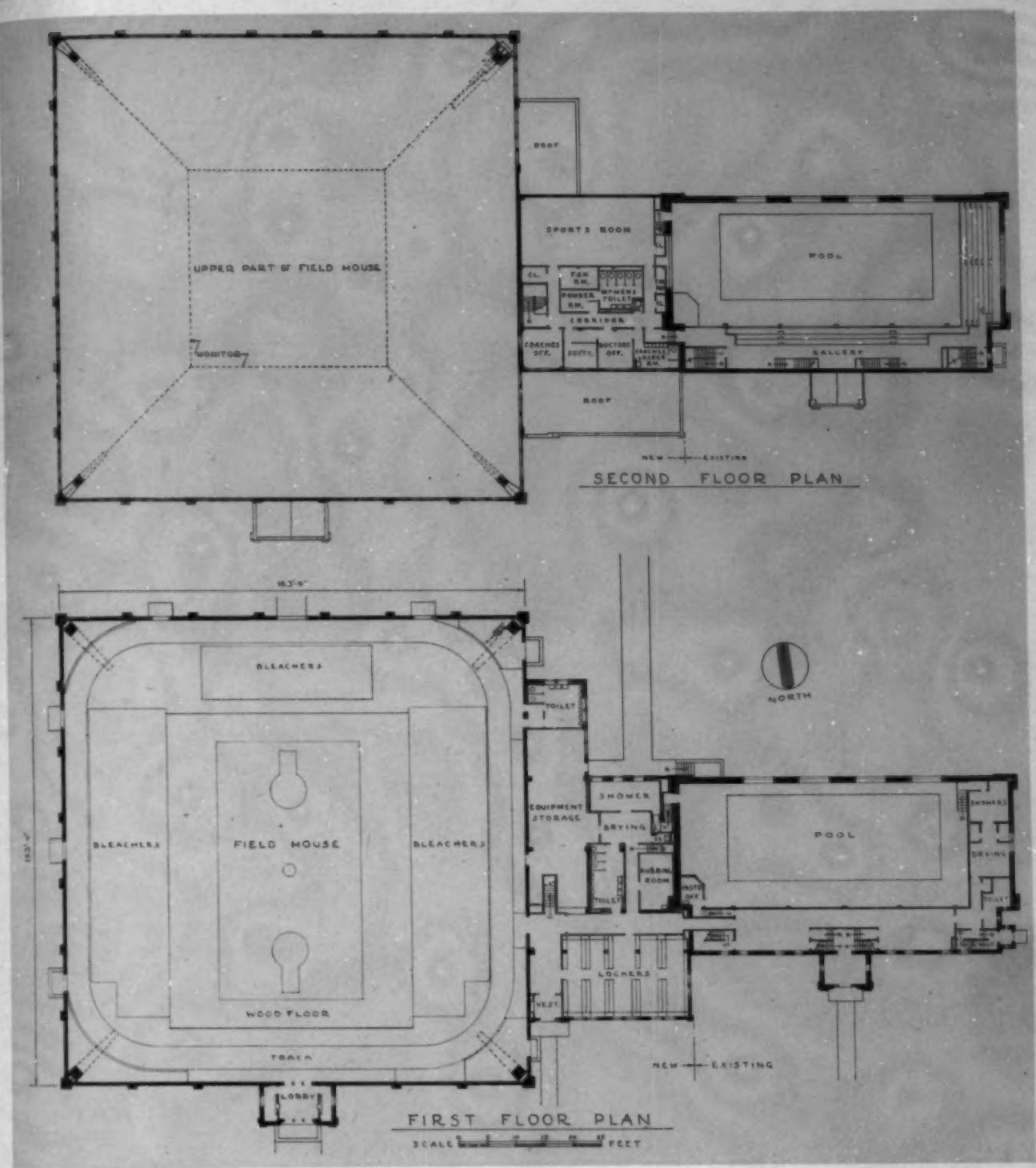
This rigid anchoring of the corner buttresses eliminates the necessity of installing diagonal ties underground to take the thrust of the roof trusses.

The panels formed by the reinforced concrete framework are filled with brick finishing flush with the columns on the inside and completely covering the concrete work on the exterior. Brick buttresses serve to stiffen each column.

The connecting building is of reinforced concrete construction, with exterior walls of brick.

The design permits the completion of the connecting building and of the field house up to the eaves while steel fabrication is in progress, effecting a double economy of cost and time. Erection of the roof framing and the completion of the roof itself will be easy.

The conventional design for a roof the size and shape of the field house provides diagonal trusses with intermediate trusses framing to the walls and with lateral trusses stiffening the intermediate trusses. Again, with economy in view, the architects have designed a roof with truss construction confined to the diagonals and to the framing under the monitor. All other structural mem-



bers are stock rolled steel sections, the largest of which are 27 inches deep and 50 feet long. Fabrication is thus held to a minimum.

A 2 inch wood plank roof on top of steel rafters will be finished with slate. Except for this plank roof, the entire building is fireproof. Windows in the connecting building and on three sides of the field house have steel sash, but on the western wall light deflecting glass brick will diffuse late afternoon sunlight. Windows in the monitor operate in groups either manually or electrically.

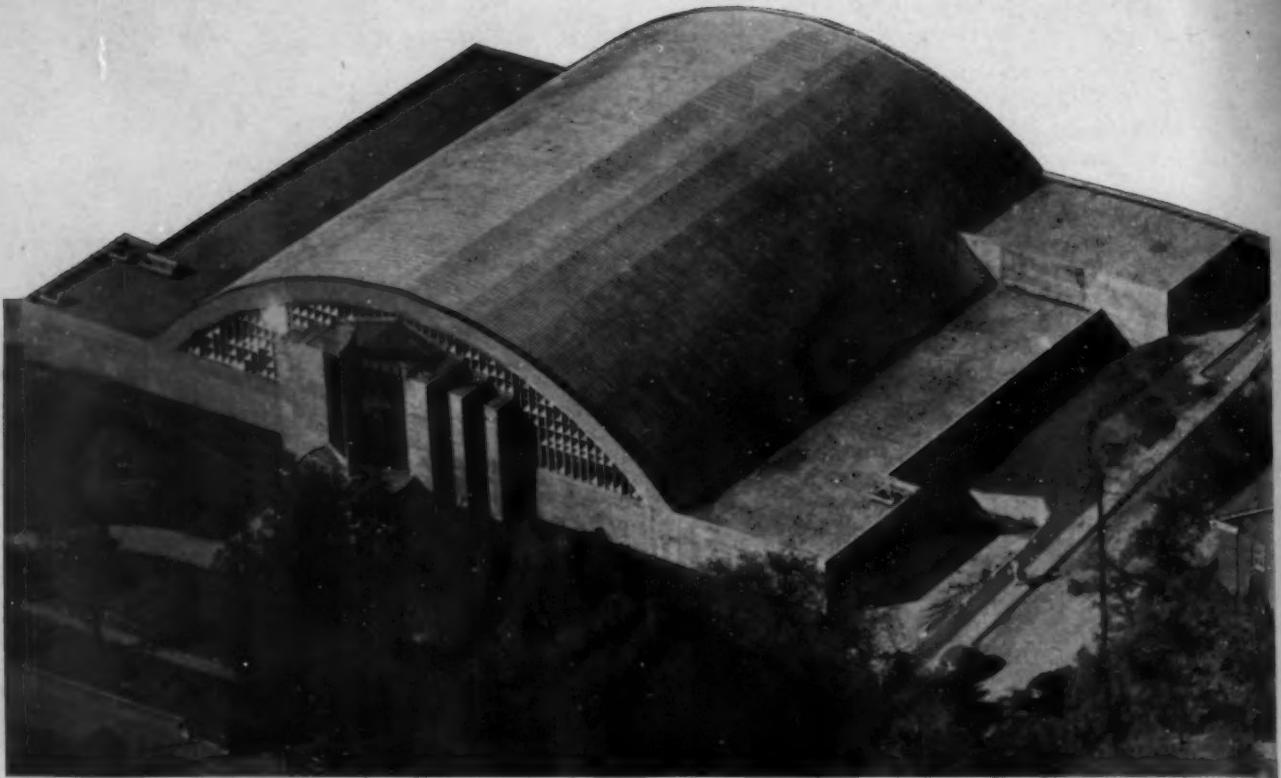
The field house contains a 0.1 mile dirt track 8 feet wide. The area inside the track is large enough for a regulation baseball infield. Permanent fire-proof cotton netting will be installed in the field house for baseball practice.

A removable wooden floor, 85 by 110 feet, will serve as a regulation basketball court or as two practice courts. Some \$10,000 multiple use bleachers are to be moved in from the football field to provide seating for 2,000.

The lights are incandescent, 500 to 1500 watts each, in aluminum reflectors.

Steam heat from the central boiler plant will be distributed through unit heaters in each corner. Blowers to the upper areas will be connected to outdoor vents for fresh air on warm days.

The building connecting Trowbridge and the Memorial Field house has interior partitions of glazed brick tile, with quarry or ceramic tile floors and steel sash windows. For the sports room an acoustical ceiling is specified. Heating will be by steam from the main boiler plant. Exhaust ventilation will be provided from laundry and locker rooms.



ARMY HANGAR BECOMES BELOIT

Field House

V. A. EMILSON

Business Manager
Beloit College

BELoit COLLEGE'S NEW \$200,000 field house and auditorium is a permanent building even though its basic structure is a war surplus aircraft hangar.

The hangar had been crated for shipment overseas during the war but peace left it in a storehouse. It had been admirably reinforced throughout, as precaution against tropical or arctic storms. This reinforcement aided materially in the adaptation of the structure to field house use.

Two wings and a modernistic facade have been added to the original hangar, which was bought for \$11,000. The towering entrance pylon, in combination with the semicircular roof, gives a streamlined touch to the building. The upper part of the facade, of concrete tubing, has been inlaid with glass bricks. The hillside is landscaped

and a semicircular sidewalk leads to the entrance. All told there are five entrances, one being large enough for cars to enter the auditorium.

The main body of the building, the former hangar, is 180 by 168 feet. As this building was engineered under emergency allowable stresses and was not figured for the 35 pound per horizontal square foot vertical snow load and the 20 pound per square foot wind load required by the state of Wisconsin, it was necessary to reinforce the purlins and the top chords of the arches by welding on supplementary members. This added approximately \$3000 to the cost.

The steel roof was finished by a sprayed-on thermal insulation with an aluminum paint finish; this cost \$9000, bringing the total cost of erecting the hangar, including fittings, to \$12,000,

a small portion of the cost of the completed building.

Since the college contemplates building a gymnasium at the rear of this building, a boiler room large enough to accommodate the added capacity is included.

Other features are public toilets, vestibule and lobby, offices for the physical director and doctor, locker rooms for the home and visiting teams and another for special groups in physical education.

The floor, sufficient for one large basketball court or two small ones, has been laid across the width of the building. This arrangement allows for a four-lane cinder track and a 60-yard straightaway track for indoor track meets and permits a larger seating capacity.

Balconies on either side of the court have permanent seats of the theater type and will accommodate a large portion of the spectators. For such events as basketball games, other fans will be seated on temporary bleachers. The seating capacity is 3000.

The public address and radio broad-

casting systems are wired so that announcers are able to take up positions in almost any part of the building, depending upon the type of performance being given.

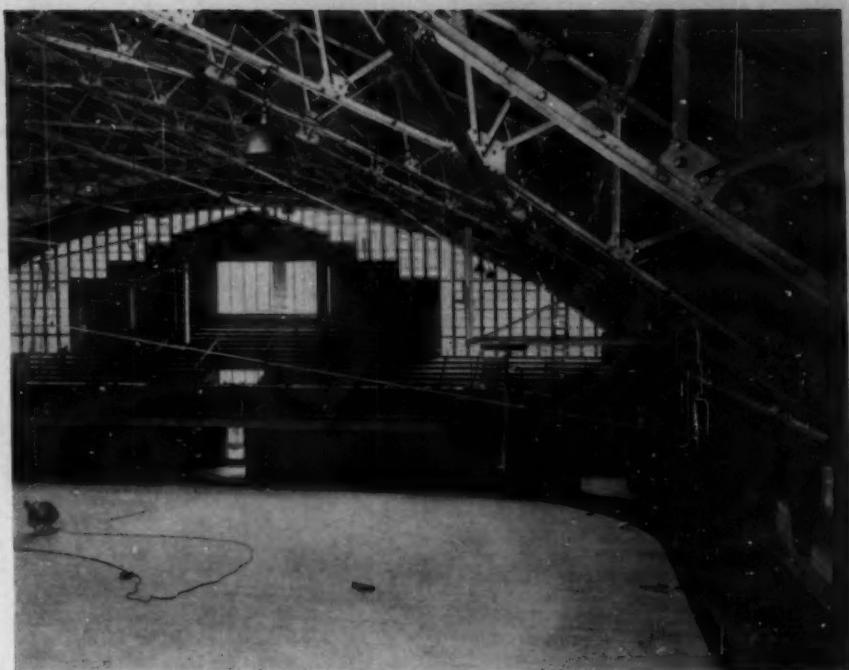
The wings on the east and west sides of the auditorium house offices, shower rooms, toilet facilities, physical education rooms, and storage space.

The overall dimensions of the field house are 164 feet by 195 feet, making it adaptable to civic meetings, conventions, public performances and livestock shows.

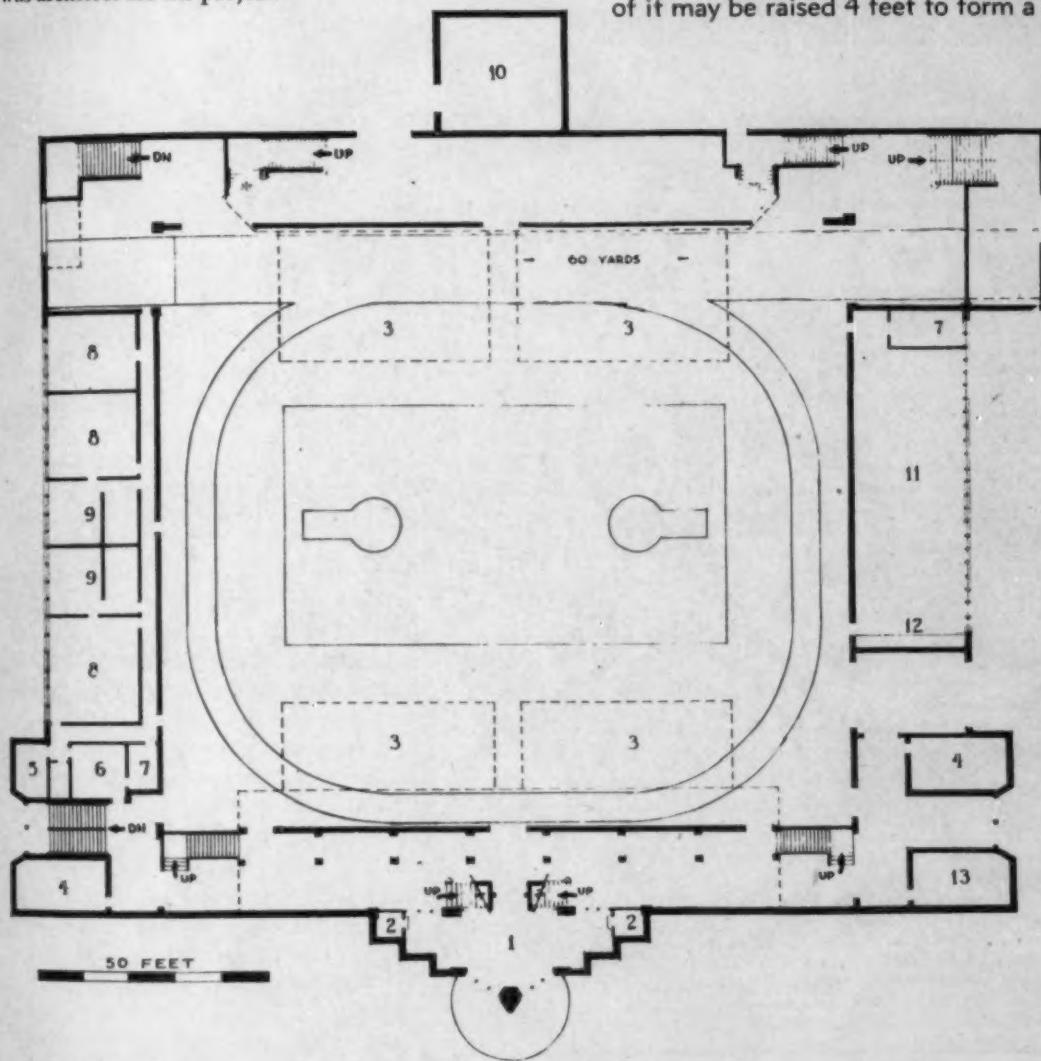
The new building will also be used for registration, commencement exercises, social events, banquets, athletics, physical education and bad-weather football.

Adjoining the main floor area is an exercise room, 24 by 70 feet. This space is equipped with a restaurant sink and power outlet for steam tables to provide a serving room when the building is used for banquets.

Maurice Webster of Evanston, Ill., was architect for the project.



AS AN AUDITORIUM, the Beloit field house seats 4200. There are 1200 permanent balcony seats. The remainder of the seating capacity consists of demountable bleachers. The portion of the floor that is dirt is supplied with a sectional floor that may be laid level with the basketball floor, or any part of it may be raised 4 feet to form a stage.



Weekly Inspection Report

Institution Name..... Inspected by.....
 Approved by..... Title..... Week Ending..... 19.....
 Date.....

- 1. FIRE ESCAPES** Safe..... Obstructed.....
2. EXITS Safe..... Obstructed.....
3. STAIRWAYS Safe..... Obstructed.....
4. FIRE DOORS Safe..... Obstructed.....
5. PANIC LATCHES Operative..... Inoperative.....
6. ELECTRIC WIRING
 Condition throughout? Good..... Fair..... Poor.....
 Wires under rugs? Yes..... No..... Where?..... Over nails? Yes..... No..... Where?.....
 In contact with metal objects? Yes..... No..... Where?.....
 Electric light bulbs against combustible material? Yes..... No..... Where?.....

- 7. ELECTRIC APPLIANCES**
 General condition? Good..... Fair..... Poor..... Remarks.....

- 8. HEATING EQUIPMENT**
 General condition? Good..... Fair..... Poor..... Remarks.....
 Heater, checked and cleaned periodically? Yes..... No.....
 Fuel feed piping? Good..... Fair..... Poor..... Remarks.....
 Fuel, safely stored? Yes..... No..... Remarks.....
 Flues, condition? Good..... Fair..... Poor..... Cleaned regularly? Yes..... No.....
 Any woodwork or other combustible material too close to steam pipes, flues, boilers, furnaces? Yes..... No.....
 Are hot ashes put in metal containers? Yes..... No.....
 Is automatic pilot on fuel oil or gas heater working properly? Yes..... No.....

- 9. HOUSEKEEPING**
 Condition throughout? Good..... Fair..... Poor..... Remarks.....
 Is all combustible waste safely disposed of each day? Yes..... No.....
 Are storerooms and closets orderly? Yes..... No.....
 Is attic free of rubbish, old papers, broken furniture and so on? Yes..... No.....
 Are "dustless" oil mops kept in safe place when not used? Yes..... No.....
 Is basement clear of rubbish and scattered kindling? Yes..... No.....
 Are areas under stairways free of combustible materials? Yes..... No.....

- 10. FLAMMABLE LIQUIDS**
 Safely handled and stored? Yes..... No.....
 Are gasoline or other hazardous liquids used for dry cleaning? Yes..... No.....
 (Should be absolutely prohibited.)
 Are oily rags or other greasy material put into metal containers with self closing lids and kept away from main buildings? Yes..... No.....
 Are flammable liquids, such as gasoline, kerosene, cleaning and polishing liquids, stored safely away from main buildings? Yes..... No.....

- 11. FIRE PROTECTIVE EQUIPMENT**
Extinguishers
 Adequate number on each floor? Yes..... No.....
 (Not more than 100 feet of travel should be required to reach nearest unit.)
 Have extinguishers been recharged within a year? Yes..... No.....
 Is date recharged shown clearly on tag? Yes..... No.....
 Are extinguisher nozzles free of foreign material? Yes..... No.....
 Is standpipe hose in good condition? Yes..... No.....
 Ever tested? Yes..... No.....

- Automatic Sprinklers
 Any heads missing? Yes..... No..... Where?.....
 Disconnected? Yes..... No..... Where?.....
 Obstructed by high-piled stock? Yes..... No..... Where?.....
 Any sprinklers or sprinkler piping exposed to freezing? Yes..... No..... Where?.....
 Are all control valves open? Yes..... No.....

- Alarms
 Plainly marked? Yes..... No.....
 Can be sounded from any floor in building? Yes..... No.....
 Sounding device accessible? Yes..... No.....
 Is public alarm box near premises? Yes..... No.....
 Do employees know how it operates? Yes..... No.....
 Are employees periodically drilled and instructed in proper procedure to meet fire emergencies? Yes..... No.....

- 12. FIRE DRILLS**
 How often held?..... Average time to empty building?.....

- 13. KITCHEN AND BASEMENT**
 Frequent cleaning of grease from stoves? Yes..... No..... Vent hood, kept free of greasy deposit? Yes..... No.....
 Combustible materials, such as cloths, cartons and wood boxes, kept away from stoves? Yes..... No.....
 Storerooms, properly lighted? Yes..... No..... Is area orderly? Yes..... No.....
 Locker rooms, housekeeping? Poor..... Fair..... Good.....
 Is proper type extinguisher accessible for possible grease fire? Yes..... No.....
 Are exits from these areas protected with fire doors? Yes..... No.....
 Are exposed pipes free of objects hanging on them? Yes..... No.....

WATCH OUT FOR

DOROTHY DOWNS

Assistant to Chief Engineer
 Firemen's Mutual Insurance
 Company

FIRE HAZARDS IN COLLEGES AND universities are similar to many of those that exist in industrial plants and in homes. One of the hazards that causes the largest number of fires is electrical equipment which is not maintained in safe operating condition. Along with this goes defective wiring. All electrical equipment should be installed in accordance with the National Electrical Code. Makeshift installations by amateur electricians must not be tolerated.

CARELESS SMOKERS A DANGER

The careless use of smoking materials by students and employes has increased the fire loss record. Enforcement of smoking regulations and education to develop safe smoking habits will do much to control this hazard. Brief discussion of fires caused by smoking or stories from local fire records printed frequently in student or employe publications may help.

Defective or poorly maintained heating equipment, dirty flues and chimneys and cooking equipment in kitchens cause numerous fires. Soot should be cleaned yearly from chimneys and flues and grease deposits removed frequently from ventilating ducts over stoves. Openings may be provided in ducts to accomplish this.

Rubbish allowed to accumulate and not properly incinerated may ignite spontaneously from some material within it or may supply fuel if exposed to a source of ignition, such as a carelessly tossed match or cigarette or too close proximity to a heater of any kind.

Open flames or sparks in chemistry or physics laboratories can start fire in flammable materials near them, transmitting heat and flame to chemicals which may react with violence.

Fire

Weekly Inspection Report

14. SMOKING

Any evidence of violation of rules? Yes..... No..... Where?.....
Enough receptacles for disposal of butts and matches? Yes..... No.....
Additional receptacles needed? Where?..... How many?.....

REMARKS:

NOTE: The responsibility of all employees for protecting the lives of the occupants makes it imperative for those in charge to obtain information regarding inspection service and advice provided under the terms of their fire insurance coverage.

For special problems involving fire hazards a fire protection engineer of the insurance company should be consulted.

KEEP REPORTS ON FILE FOR REFERENCE

Workmen using paint, blowtorches, welding equipment, tar kettles and salamanders often are not wholly fire conscious and need to be warned.

There is not sufficient space here to cite all causes of school fires. Only the most outstanding have been given.

A number of factors contribute to the rapid spread of fire. Fire resistive walls, such as brick, do not make a building safe from fire. It is the interior construction that is important. Some of the undesirable interior features are open stairways and elevators, dumbwaiters, air ducts and ventilating shafts. Smoke, fire and the unburned gases of combustion spread rapidly through such openings and cause panic and suffocation. They should be properly closed with fire resistive material and cut-offs to retard the travel of flame, smoke and gases and to provide a safe means of exit.

Another type of opening which often exists in buildings of older design is that which extends between the basement and attic at the exterior wall studs. Fire stops should be provided at each floor. To supplement these, it is advisable to fill the wall spaces with a fire and weather resistant insulation.

FIRE DOORS NEEDED

Doorways between sections of college buildings should be protected with approved fire doors which are kept closed. If it is not practical to keep them closed at all times, they should be held open by means of fusible links which, when exposed to the heat of fire, will fuse and allow the door to close automatically, thus confining the fire to one area. This assumes, of course, a sufficient number of exits to permit escape from any area even though the fire door may close.

Flammable interior finishes, such as wood sheathing and trim, are undesirable in that they add fuel to a fire and accelerate burning.

Areas in which more than the ordinary fire hazards exist should be segregated to lessen the danger from spread of fire. In this category are boiler rooms, paint and carpenter shops, laboratories and manual training rooms. Walls and ceilings should be of fire resistive construction, openings protected by fire doors and automatic sprinklers provided to control and extinguish incipient fires.

Inadequate protection often has been a factor in loss of life and extent of property damage in school fires. Automatic sprinklers fed by a strong water supply provide as nearly ideal protection as it is possible to obtain, especially where life is at stake.

VALUE OF SPRINKLER SYSTEM

The following brief stories demonstrate the value of sprinkler protection. A short circuit in an extension cord from a radio set started fire in a frame dormitory. Sprinklers operated promptly and extinguished the flames. Cleaning rags in a closet ignited spontaneously at 3 a.m. Sprinklers held the fire in check. Rubbish in a residence hall boiler room ignited spontaneously. Sprinklers extinguished the fire. The loss was small. A cigaret fell into a concealed space below the floor and smoldered for several hours. Sprinkler alarms summoned the volunteer fire department and the sprinklers held the fire in check until more aid arrived.

Lack of facilities for quick safe exit has taken a grim toll in human life when fire has occurred. No matter how carefully residence hall fire drills are practiced and how calmly the

evacuation of buildings is executed, students may react with panic when faced by smoke and fire which cut off their means of escape.

A sufficient number of exits and fire escapes are a "must" for every college building, large or small. Students should be trained to use alternate exits should another be obstructed by fire or smoke.

Fire drills should not be conducted on scheduled days or hours. They should be practiced frequently and each time on a different day at a different hour so that they will not be expected.

Effective alarm systems should be a requirement, whether electrically or hand operated. Delay in sounding alarms and notifying the fire department allows fire to gain headway.

Watch service is important in protecting college properties. In a large high school in the Middle West several years ago, seven fires of incendiary origin started simultaneously in different parts of the building. One fire set under the master clock destroyed it and stopped all clocks at 3:14 a.m. A fireman and caretaker coming on duty at 6:00 a.m. discovered fire throughout the building and turned in an alarm. Despite the fact that the building was of fire resistant construction consisting of brick walls, concrete floors and cement plaster suspended ceilings, the contents were combustible and burned freely. Heat from the burning contents caused extensive spalling of the plaster. The loss was approximately \$10,000. The greatest factor contributing to the extent of damage was the lack of night watch service.

Untrained personnel, such as janitors and caretakers, inadequacy of public fire departments to cope with

large fires because of lack of equipment and personnel, insufficient volume of water for hose streams or sprinklers and lack of hydrant protection are other phases of negligence which contribute not only to college fire losses but also to loss of human lives.

Every college should have a definite program for inspections of the entire property: at least weekly and more frequently if found necessary. Included here is a sample inspection report form which may be adapted to individual needs. If used properly and if the inspections are executed and supervised conscientiously, it should help to maintain fire prevention and fire protection at a high level. The responsibility for carrying

this out rests upon the superintendent of buildings and grounds.

Plans for new buildings should be reviewed by a recognized fire protection engineer and the necessary structural features related to fire safety should be discussed with the architects.

Preventing fires is an individual as well as a group responsibility. To develop fire consciousness, the basic principles of good fire prevention practice should be treated as an educational project. This is being done in a number of colleges.

It is important, first, that faculties understand the principles of fire prevention and fire protection. Instruc-

tion should be planned with the assistance of federal, municipal or privately sponsored fire prevention bureaus or organizations specializing in this field. Fire prevention education curriculums should be reviewed at least yearly to assure the incorporation of new information.

Administrators for college property should thoroughly understand what their insurance coverage is and whether it provides inspection service for safety from fire. Failure to provide full protection for the lives of those for whom they are responsible, because of a higher insurance rate, is a mistake for which those in authority may pay heavily should a fire occur resulting in the loss of life.

OPERATING A SNACK BAR

DONALD WILLARD

Purchasing Agent, Mount Holyoke College

THE NEED FOR AN ADEQUATE SNACK bar and recreation room had long been felt at Mount Holyoke College. With financial assistance from the Alumnae Association and in collaboration with the Student Government Association, the project of redecorating and equipping the college tea room was undertaken.

A red and gray terrazzo floor replaced the old wood floor. A new snack bar was installed with a counter with red composition top. The cost of the installation was \$4000, Otto C. Kohler, superintendent of buildings and grounds, supervising the construction.

New equipment was purchased for the old tea room including a four-burner coffee unit, two small grills, a four-slice toaster, two electric mixers, a refrigerator, stove and cash register.

The tea room and snack bar are managed by Mrs. Ida Adamson, who has two full-time employees and, on special occasions, such as a dance, concert or college movie, employs students or local girls. On these nights students flock down to the tea room from the auditorium upstairs. In an attempt to serve the students in the order in which they appear a number system has been installed.

On a dance night 40 per cent of the income is derived from the sale

of bottled soda. Consequently, a separate soda bar is set up to handle bottled drinks only. This eliminates long waiting periods. All bottled drinks are served in paper cups to prevent bottles from being scattered all over the campus.

One of our problems is the return of soiled dishes to the counter. Students are asked to return their soiled dishes, but few do, with the result that the room becomes untidy, clean dishes become scarce, and service is retarded. The use of paper plates and cups would eliminate the scarcity of clean dishes but is a greater expense in an operation where breakage is negligible. Furthermore the problem of untidiness might be increased. We do resort to paper dishes on special occasions to solve the dishwashing problem.

All sales are strictly cash. Prices, which are in line with local eating places, are reviewed from time to time to make certain they remain so. Income in excess of expense is credited to a reserve account to be used to equip and improve the tea room. It is not our intent to compete with local eating places. We realize that they have a definite place in our college community just as we feel the tea room has a place on the college campus.

The snack bar may be closed up when not in operation by the curtains between the pillars being dropped and fastened. When the fountain opens again, the curtains are rolled up and concealed behind the awning effect at the top.

The original kitchen was divided by a partition, and in the smaller area all grilling is done to eliminate odors. This requires one person in the kitchen most of the time.

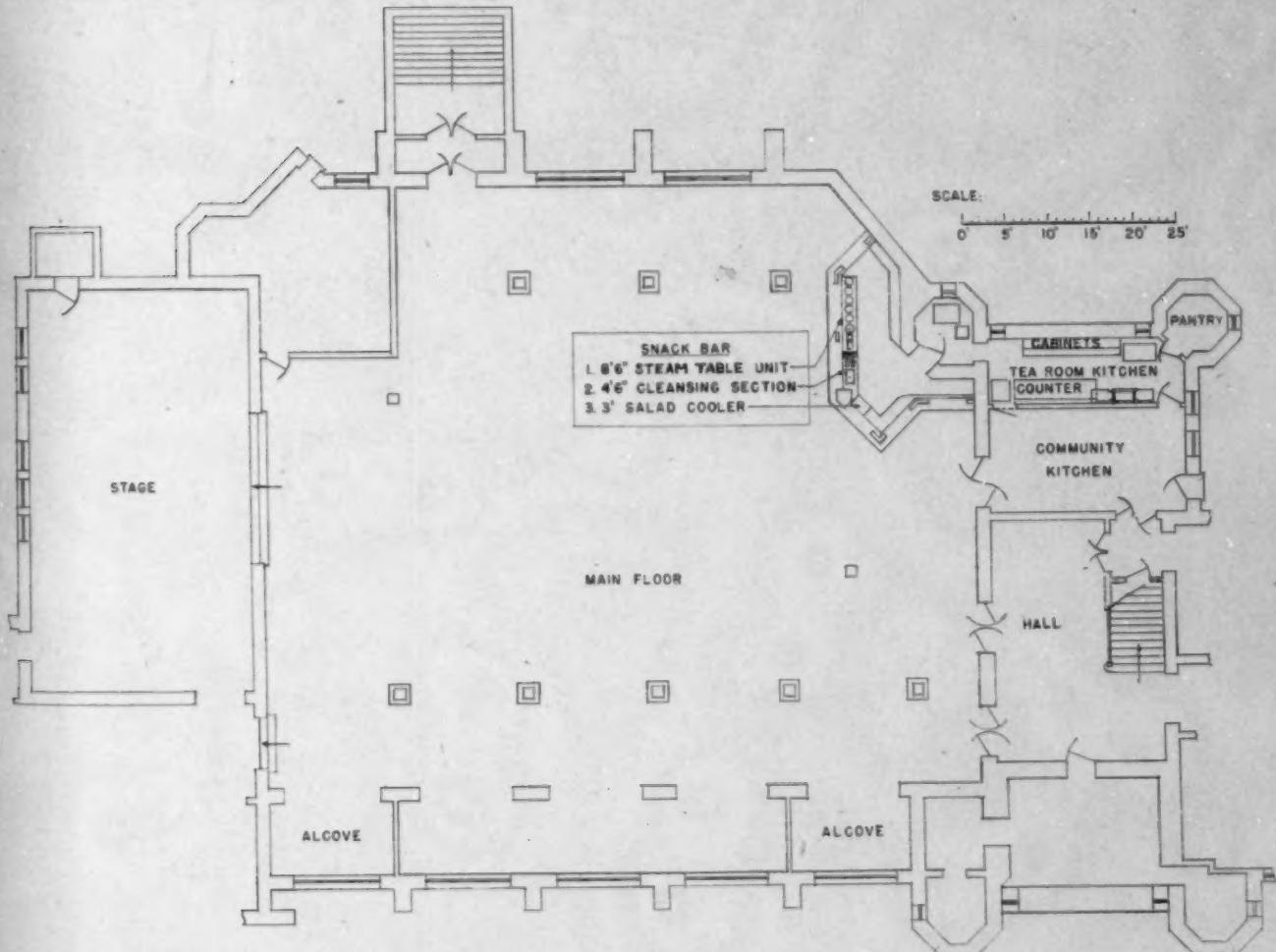
The other kitchen is available for use by an outside caterer, sometimes employed for college functions.

Equipment purchases and nonperishable supplies are bought through the central purchasing office. Perishable supplies are purchased by the manager. Price advantages are realized by buying ice cream and milk under the college contract.

Weekly reports are submitted by the manager to the purchasing agent who is responsible for the financial supervision of the operation. These reports are broken down to show the income received during the past week and for the year to date from the sale of (1) ice cream, (2) drinks, (3) sandwiches and (4) miscellaneous, which includes candy, gum, cigarettes. They also include the sales for the corresponding periods last year. Any special occasions that were held during the week are noted.



MOUNT HOLYOKE'S SNACK BAR and tea room are open from 3 until 11 o'clock seven days a week. It is the spot where students come to relax over cokes and hamburgers.



REMODELED TEA ROOM serves as student hangout and permits catering to teas, dances, and college and alumni functions.

HOUSING UNITS FOR CENTENARY'S

Faculty

S. D. MOREHEAD

Business Manager, Centenary College of Louisiana



DUPLEX HOUSE, each unit of which has two bedrooms, living room, bath and kitchen-breakfast room. BELOW: Interior showing asphalt tile floor, plastic painted interior walls and sand finished plaster outside walls.



A NEW, CHEAPER CONSTRUCTION technic has been employed in the building of five faculty living units during the last year by Centenary College of Louisiana at Shreveport.

The units, which include a duplex with two bedrooms in each suite, and three one-family houses with three bedrooms each, have concrete walls and floors.

Using the hollow wall principle, the exterior walls are actually made up of two independent concrete monolithic slabs, each 4 inches thick. They are cast one inside the other with a dead air space of $2\frac{1}{2}$ inches between them. This air space is continuous, extending around the entire house, even in the corners. It insulates against both heat and cold and reduces condensation on inside walls.

The hollow type of masonry wall, while not new, is generally prohibitive in price because of the expense of building forms for it. For the Centenary houses, however, a new type of portable steel slip-form was used which can be operated by a crew of common laborers under the supervision of one skilled foreman.

The concrete was put into the forms fairly dry and tamped thoroughly until firm enough to hold its shape. By using a dry mix, it is possible to lift the forms for starting a new course as soon as one is completed, without waiting for the concrete to set. This makes pouring continuous. The forms are designed to make a 9 inch course, and they come in various lengths to fit the varying wall spaces.

Rods of $\frac{1}{4}$ inch steel were placed both vertically and horizontally in the slabs, and Z-shaped tie rods were laid across the hollow space to hold the two wall members together.

The exterior surfaces were finished in stucco, and the interior surfaces were plastered, the dry mix concrete having a coarse texture which holds these surfacing materials firmly.

As an unusually heavy foundation is required to bear the weight of the concrete, a trench, 24 inches deep and 12 inches wide, was excavated, and post holes, 5 feet deep, were drilled every 8 feet along the length of the trench. Into these were set reinforcing rods of $\frac{3}{8}$ inch steel, and a wet mix of concrete was poured to fill both the post holes and the trench.

Floors are 4 inch reinforced concrete

slabs, poured on a 6 inch gravel fill. The fill, plus the deep continuous foundation all around the house, prevents any seepage of water from the ground. When the houses were completed, asphalt tile was applied to the floor surface in all rooms except the baths where ceramic tile was used. A hardwood finish can also be applied by cementing oak tiles or boards to the concrete.

Conventional construction was used on roofs and interior walls. Partitions and ceilings were covered with sheet rock and a plastic paint to match the sand finish plaster on the concrete walls.

The windows are a departure from the conventional, however, in that they slide horizontally into the hollow of the wall. They are of metal and glide on rollers over a metal track. Designed and manufactured by the same firm that makes the wall forms, they afford twice as much ventilation as double hung sash. To augment the natural ventilation through the large openings, an attic fan was installed in each family unit.

Funds for construction were taken from the endowment account of the college as an investment and are to be amortized over a period of years by returning the full amount of rental to the account. A monthly rental of \$50 is charged for each unit.



THREE BEDROOM HOUSE of concrete with double walls and horizontally sliding windows.

BELOW, left: One course of the completed wall showing the air space between the outer and inner slabs. In the background is a corner form which permits a continuous air space even around the corners. BELOW, right: In the foreground a patented steel form just before it is lifted for next course. Workmen are filling corner form and tamping dry mix into the form.



THE VIRTUES OF A BUSINESS OFFICER

ROBERT DANIEL

President, Shaw University

THE POSITION OF COLLEGE PRESIDENT has undergone many changes in recent years. In the beginning the president was a person of the highest character development and of stalwart moral leadership, an educational philosopher, and a business executive, in addition to many other "mighty" characteristics and virtues.

Experience revealed that one person cannot manifest all of these virtues in equal measure. Consequently, personnel deans and directors of religion have been brought in to assist in the character development program; academic deans and department heads share the responsibilities of developing educational philosophy and practices, and business managers have been entrusted with the tasks of fiscal responsibility and physical plant management. College business management has become a profession because of failures of college presidents to be good bookkeepers and business executives.

Efficient functioning of a college requires the full cooperation of all administrative officers. The various aspects of an administrative program are so interrelated that the policies and practices of one office may have a profound influence in many areas.

FOUR SIGNIFICANT AREAS

A business officer has many spheres of influence. Four of these areas I consider significant. In the first place, there is danger that business objectives may negate educational objectives. In the educational program of the college the president has the assistance of the dean and, in the financial program, he has the service of the business officer. It is important that both of these administrative assistants should understand the program and objectives of the institution and

work in continuous understanding of each other's roles.

The financial program of a college is to facilitate the educational program, but there is danger sometimes that the one who directs financial procedures may work at cross purposes with the one directing the educational areas, and vice versa. The president's responsibility is to interpret the educational program, but the administration of it belongs to the academic deans; the president obtains the financial resources, but the administration of them belongs to the business officers. Since the purposes of a college are essentially educational, the objectives of the business officer should serve the purpose of advancing the educational objectives. Thus, it is important for the business officer to know the special educational emphases of a given year so that the educational staff will have the financial resources needed to put into effect the required provisions.

PREVENTING OVEREXPANSION

Second, there is danger that the educational program may be unsound financially. Those responsible for the educational advancement of the college may be so concerned with program expansion that they overlook the financial factors involved. Because of rivalry for prestige, many colleges have expanded their programs beyond their capacities. The major service of a business officer is to direct sound business operations. It may be necessary for the business officer to point out to the academic authorities the inability of a given college to institute every service that certain other institutions may be offering.

In the third place, there is danger that staff members by their practices may nullify the character development aspects of education. The business

procedures and relationships of students with the business office staff may have as profound an effect upon the ideals and habit patterns of students as have lectures in classes in ethics or in the college chapel.

The character and practices of the staff as manifested in its business relations with students are easier of imitation and have more influence than moral precepts. If students are to develop habits of reliability and accuracy, there is no better way to do it than in the relationships of their accounts. Many students will learn best the importance of courtesy and understanding in business transactions through the exercise of such virtues on the part of the business office staff. Habits of honesty, of reliability, of tolerance, and of problem solving without emotion may be developed out of student relationships with the business office.

INTRAMURAL COOPERATION

In the fourth place, there is danger that faculty and students may be unsympathetic and noncooperative in the financial problems of the college. Ignorance of business principles and absence of financial responsibilities on the parts of both faculty and students contribute to unwarranted lack of cooperation. It is especially important in the small institution that endeavors to adjust its program in terms of the special problems of the faculty and students that all understand its basic financial problems. This understanding contributes to the best morale.

Faculty and students may be unsympathetic because they lack certain facts in the case. Thus, problems arise when requisitions are not filled for immediate service, when there may be an alternative selection of materials, when certain limitations are imposed in equipment and supplies, or when curtailments are necessary in certain services. An occasional talk by the business officer to the faculty regarding the financial program and business procedures of the institution may be helpful in obtaining cooperation.

I have endeavored to point out that business officers have spheres of influence beyond requisition forms, balance sheets, budget pages, bookkeeping ledgers, and financial statements. They are not office fixtures but a living part of the institution. The lifeblood of a college is enriched or impoverished through business office influence.



NO FEES, NO CREDITS

An oversimplified and archaic plan

M. M. CHAMBERS

American Council on Education

STUDENT FEES FOR TUITION AND other services are normally collected in advance, for a term, semester or academic year. There is, however, a widespread practice of long standing, especially among nonpublic institutions, of allowing impecunious students to pay only a fraction of the total at the time of admission and the remainder in installments. While serving to some extent the good purpose of enabling worthy students to surmount financial barriers, the practice complicates the business of bursars and imports a risk of some losses to the institution.

CAN TRANSCRIPT BE WITHHELD?

Commonly, trustees and faculty members feel that deferring payment of fees is an almost automatically safe and secure practice from the business standpoint, because they believe that in any case of failure or refusal to pay, the institution has a right to withhold the credentials earned by the student until his fees are paid in full—whether the credentials are in the form of a degree, diploma, transcript of credits, or other certificate. In this view, the established fees are an essential part of the *quid pro quo* for the credentials. The view is a bit oversimplified and smacks of the outmoded concept of education as a mere matter of private contract between a buyer and a seller.

A United Press dispatch of January 4 reported a ruling by the attorney general of Nebraska to the effect that a public high school cannot withhold a transcript of credits earned by a former student who has transferred to another institution in another state, merely because the tuition fees in his behalf have not been paid. "Refusing to issue the academic credits," the attorney general is reported to have ruled, "would be exercising a form of coercion which is not in accord with the policy of the state."

Presumably the fees were owed to the public high school by reason of the fact that the student had attended that school while a resident of another school district, probably a district maintaining no high school of its own; whether the fees in his behalf were owed by the school district in which he then resided or by his parents does not appear. At any rate, the crucial point of the ruling is that academic credits are not bought and sold like sacks of wheat and that a presumably innocent and worthy student in a public high school will not be deprived of credits actually earned solely because of nonpayment of tuition fees.

To be sure, the case involves a high school, not a college or university; and the institution is public, not privately controlled. Moreover, the opinion of the attorney general is lower in legal rank and of less persuasive weight than the decision of a court; therefore, it cannot be taken as a sure indication of what a court would do in similar circumstances, much less in different circumstances, involving, let us say, a private college.

STRAW IN THE WIND

Gathering speed and strength, as evidenced by several decisions of state and federal courts discussed in this column during the last year and a half, as well as by many earlier decisions, is a movement toward regarding higher education not as a commodity to be bought at prevailing prices by those able to pay for it but as a right belonging to qualified individuals, and a service owed by the state to its qualified citizens.

This concept might be limited to state and local public institutions, but actually it is not. Hand in hand with it goes the idea that privately controlled educational institutions are operating in a field so vitally affected with the public interest that they, too, may expect

the older legal concepts to which they have become accustomed when higher education was accepted as a special privilege for a fortunate few may soon be modified at many points.

INVENTIVENESS CALLED FOR

Many institutions, both public and private, have seemingly wholesome administrative rulings, often published in their catalogs, to the effect that no student leaving the institution shall receive his credentials for academic work completed unless and until his local bills are paid, including debts to local tradesmen as well as debts to the institution. Payment of just debts is a matter of morals, and the Victorian administrator could readily take the stand that nonpayment of debts made a student morally unfit to bear the credentials of his institution. The total disappearance of this idea, if it should occur, would be scarcely as revolutionary as the abolition of imprisonment for debt, which occurred only a little more than a century ago.

Without entering into the hazards of prophecy, it may be suggested that a thorough revamping of the 19th century idea of tying academic credits to dollars and cents payments is in order; some of the comfortably moss-grown administrative practices based on that idea may well be reconditioned to accord with 20th century concepts of education as an individual right and as an indispensable public service. This is not to say that any educational institution should encourage debt-jumping or cease to have concern for the morals and character of its students, but administrative ingenuity can devise other and better means of encouraging or ensuring payment of just debts, in lieu of the oversimplified and archaic plan of linking this matter with the issuance of earned academic credentials.


CONFUSION, INEFFICIENCY AND RED tape, these are the components of the hiring procedure in a college or university, or so some would be led to believe by the disgruntled employe or department head who gets enmeshed in the pay roll complexities that seem to abound in many institutions.

Hiring a new employe and getting his name on the pay roll must necessarily be a fairly elaborate procedure in the typical college or university. Unlike its business or industrial counterpart where the pay roll office fits neatly into a rigid line organization with clearly drawn lines of communication and a "you-do-as-I-say" relationship, the pay roll office in a college or university serves a fairly large number of more or less autonomous units in an organization in which the lines of communication are sometimes indirect and occasionally snarled and in which a working agreement functions well only when all persons concerned make a constructive effort to make it do so. In fact, the circumstances are such that "Operation Employment" can take on the status of a major undertaking.

Complexity and difficulty need not be correlative, however. Hiring a new employe and getting his name on the pay roll can be an easy, smooth, functioning procedure if everyone involved will work to make it that. It is a procedure, nonetheless, that must be followed punctiliously. Hence, there must be carefully developed, detailed employment procedure, a procedure as simple, direct and free from superfluous impediments as it is possible to make it, and all those involved in the employment process must be instructed exactly as to how it works.

EMPLOYMENT PROCEDURE

It is easy enough to establish an employment procedure. Indeed, with the slightest encouragement, it will grow and grow until it becomes the master rather than the servant it was originally intended to be. On the other hand, it takes imagination, experimentation, patience and *work* to develop a procedure that is simple and effective.

An employment procedure is custom made. It is not something that can be moved bodily from one insti-

EMPLOYMENT PROCEDURES

Simple but Custom Made

A. C. MARKS

Director of Nonacademic Personnel
State University of Iowa

tution to another. It must be adapted to a particular situation, for it must conform to internal organization, tradition and personalities. What works in one university may not work in another.

The criterion for evaluating an employment procedure is how well it accomplishes its purposes. Four basic purposes will be found in any institution.

1. The first purpose of any employment procedure should be to get the right person on the job. The "right" person is the best qualified individual that can be obtained, considering the duties to be performed and the salary that can be paid. Getting him on the job involves recruiting, evaluating his qualifications, and deciding on him as the successful candidate.

In a large institution, recruiting and screening of all applicants can usually be handled best by a single centralized agency. Final selection is a prerogative of the hiring department. Many details have to be worked out for this phase of the employment procedure and the possibilities of confusion, inefficiency and red tape are numerous. The employment procedure is good if it gets the "right" person onto the job with a minimum of irritation.

2. The second purpose of the employment procedure is to ensure that the individual is employed in conformity with institutional policies relating to budget appropriations, qualification standards and salary schedules. This should be the first item of consideration, although in actual practice it sometimes is the last matter to be thought of. For example, is there really a vacant position with an allocation of money for the position? Does

the applicant have the qualifications established for that job? Is the proposed salary in line with the university's compensation plan?

The proper time to answer those questions is not when the point of final approval of the new appointment is reached; rather, it is before applicants are ever considered for a position. The hiring department can then be in a position to make a commitment to the applicant, a delicate, but important point of policy in employer-employe relationships. The employment procedure is functioning well if there are no causes for embarrassment in these matters.

3. A third purpose of the employment procedure is to get the new employe's name on the pay roll. In most institutions the site of hiring and employment is relatively far removed from the site of pay roll writing, both on a physical and an organizational basis. In few other situations are circumstances so conducive to a state of affairs in which the left hand knoweth not what the right hand doeth. It is not enough that the information passes from the hiring department to the business office that "John Smith started to work on the 9th at \$250 per month," but the fact must be made known to and approved by a multiplicity of offices that stand between these units in the organizational hierarchy. But pass it must, and the employment procedure deserves a *cum laude* if the passage is quick and certain.

4. The fourth purpose of an employment procedure is to make certain that needed information about the employe is obtained. Having gone through the typical employment process in a college or university, few employes could be convinced that

there is any information about them that has not been extracted, not once, but many times, somewhere along the line. Most institutions are guilty of obtaining personal history data not wisely but too well. A good employment procedure will get the information that is needed to the right place with a minimum of irritation and lack of respect for the institution on the part of the applicant.

MAKING IT KNOWN

Many employment procedures, structurally good, break down in actual usage because those who have to work with them know so little about them.

"Don't know about them!" the indignant pay roll clerk will exclaim. "Why, all he has to do is read the directions: 'a,' 'b,' 'c'; that's all there is to it!"

To one who is working every day with procedures of his own making and for which he is likely to know the why's and wherefore's, this apparent lack of information on the part of the erring department head seems uncalled for. The truth of the matter is that the root of the trouble is oftener justified ignorance than sheer obstinacy.

It should be remembered that many departments hire a new employe only at infrequent intervals and it is asking a great deal of the department head to keep all the details of the procedure in mind over long periods of time. Besides, it is not unlikely that changes in the procedure will meanwhile have been made. Furthermore, the written description of the procedure customarily sent to the department has a habit of getting sidetracked at the upper levels of the organizational hierarchy and never reaching the individual who actually does the hiring. If it did reach him it is likely to have been in a form that was not easy to file for easy reference or to find when it is needed.

In the third place, even though the statement is available, the explanation is frequently difficult to read, often ambiguous, and sometimes misleading. Finally, the individual who does the hiring seldom knows all the reasons behind each detail; hence his capacity for reading between the lines is limited.

The answer to ignorance is enlightenment, and no means of enlightenment can be overlooked. Letters, memoranda or directives will reach some individuals. Group meetings are

useful. The telephone is indispensable. Finally, there is the personal, over-the-desk chat.

Success in making a procedure known is not measured, however, by the number of opportunities for enlightenment that have been made available but rather by the amount of ignorance that has been dispelled. The responsibility for making the procedure known lies with the officials who administer it; they have failed to the extent that lack of understanding prevails.

And if there is just plain obstinacy? The responsibility for conviction still lies in the same place. What is needed then is just plain, downright salesmanship. Oh, the challenge that presents!

ONE EXAMPLE

The employment process at the University of Iowa involves a number of different departments, each of which has a particular function to perform. There are also fairly rigid institutional policies pertaining to approval of positions, employe qualifications, rates of compensation and the like. In short, there are all the employment complexities that one is likely to find in any large institution.

Hiring a new employe and getting his name on the pay roll has been made a fairly easy, smoothly functioning process at the University of Iowa, however. This has been accomplished by developing a procedure that (1) centralizes the responsibility for the entire process in one office, the Office of Nonacademic Personnel, and (2) concentrates in this office almost all the actual work involved.

No new employe can be put on the university pay roll until he has cleared himself in the Office of Nonacademic Personnel as an applicant for that particular position. At that time all the personal history and whatever signatures are needed are obtained from him, the position and its classification, salary level, and availability of funds are checked, and the applicant's qualifications are approved.

When the applicant goes to be interviewed by the hiring department, he takes with him from the personnel office a reference form which indicates that everything is cleared for his appointment if he should be selected as the successful candidate by the hiring department. The department makes its choice, and the new employe is eligible to go to work immediately.

To get his name on the pay roll, the hiring department uses the referral form the applicant brought with him, indicates in spaces provided the beginning date of employment and affixes his signature, then returns the form directly to the personnel office. That is all there is to it—one date and one signature. And the directions are right there to tell him what to do next!

ADVANTAGES OF PLAN

The personnel office again takes over at that point. If the recommendation for appointment conforms with established policies, such as compensation and qualifications, the personnel office is authorized to give final approval to the recommendation and to forward all papers to the business office where the pay roll is processed. If an exception to established policies is involved, the Office of Nonacademic Personnel is responsible for obtaining approval from the proper administrative officers.

So far as making the procedure known to all the various departments of the university is concerned, each of the methods noted has been used. The entire procedure has been described in detail. This description has been distributed in letters to the department head, it is included in the university "Guide to Business Procedures," it has appeared in the monthly house organ, the *Employee Record*. Finally, it has been carried by hand and presented in person at the time of a friendly call on the departmental representative.

The advantages of this plan lie in the fact that practically all the details are handled by one office in which a trained staff is constantly working with the entire employment process. The possibilities of confusion and error are thus greatly reduced; when problems do arise, it is possible to take action to overcome them. Furthermore, responsibility is sufficiently concentrated so that one office can afford to assume leadership in making the procedure work.

It should not be inferred that all the rough spots in the employment process have now been eliminated at the University of Iowa. A large proportion of those individuals involved in the employment process are convinced, however, that hiring a new employe and getting his name on the pay roll can be a pleasant, relatively simple process.

A SUCCESSFUL STORES SYSTEM

FRED E. JONES

Director, Stores and Receiving
Department, Ohio State
University

THE STORES SYSTEM AT OHIO STATE University had its start in the dispensary of the pharmacy department, which was established in 1885. The store was cared for by the professor and his assistants.

The director of stores and receiving department as now set up is responsible to the business manager, Jacob B. Taylor. The department consists of the receiving department and shipping division, the general store (warehouse) and food warehouse (staples), the tool room and small animals division. The receiving department will be considered first.

RECEIVING DEPARTMENT

All articles purchased by the university receiving department are delivered to the receiving department. All articles shipped by the university are recorded in the shipping division.

All copies of the purchasing agent's orders are received daily in the stores department, and these orders show the university order number, the department number and project, the requisition number, the state code of funds, the delivery (building and room), the F.O.B. point, and approximate delivery date. These university orders are first listed on a numerical order sheet and then listed in the firm index. In this way we maintain a cross file both numerical and by firm name. The orders are then placed in the open order file alphabetically and numerically under each letter.

When merchandise is offered for delivery to the receiving department, it is first checked against the firm's packing list, then against our copy of the order. After the count is complete, the checker signs his name or initial and hands the sheet with the order attached to the clerk, who writes the receiving sheet on a typewriter. This record sheet is written in four copies. The original and one copy go with the merchandise, one copy is sent to the business office, and the extra copy

From a paper presented before the regional meeting of the Educational Buyers Association, Columbus, Ohio, 1947.

goes to a check file and to departments having need for an extra copy.

University truck drivers deliver this merchandise to the building and room as indicated on the P.A. copy. The signature on the original receiving sheet constitutes delivery. Each day these signed sheets are checked against the detail of the order and are filed alphabetically and numerically.

Invoices are received daily from the business office and are checked against the material which has been received and recorded. If the material received checks with the amount invoiced, the bill is approved for quality and quantity, signed by the director, and three copies are returned to the business office where the university auditor prepares the bill for payment.

The fourth copy of this invoice is sent to the department by the receiving office for its information. If, however, there is shortage, overage, damages or any discrepancy, it is reported by letter to the purchasing department. When the order is complete it is moved to the closed order file.

All in-bound express is recorded in detail by weight and w/b number (before the package is opened) on an in-bound express sheet. This record is kept to support charges and show who signed for it. Parcel post and freight are entered also. Carloads are recorded to care for freight charges and demurrage. All charges for express are recorded against the order number on which the purchase was made. The express bill is prepared in the business office and sent to the receiving department for order numbers and approval.

All freight bills come to the receiving department from the transportation company (four copies) and are approved for payment, also recorded by order number. Notices of shipment, bills of lading and correspondence concerning orders come to the receiving department from the business office.

All government bills of lading are accomplished and recorded in the receiving department.

If merchandise arrives without order or proper address, the receiving department takes it up with the shipper. The department also maintains a cylinder, drum and reel record; all containers when empty are returned for credit. The order on which they are received is kept open until the container is returned and credit received.

The receiving department maintains five trucks, whose drivers and helpers make deliveries of the merchandise received on department order numbers and merchandise from the warehouse to delivery points on the campus. One pickup truck makes delivery and pickups to and from the city Monday, Wednesday and Friday. Our trucks do miscellaneous moving of small articles on the campus. We have a truck order form No. 2861 for this purpose: musical instruments, sacks of mail, small animals and feed, library books, printing from the press, and the like.

WAREHOUSE

In the general store the university attempts to carry stocks of merchandise that has general use on the campus.

The amount and type of merchandise to be carried are determined by the purchasing agent and the director based on its character, general call, availability and the like. The following groups will show the wide range of material: stationery and office supplies; electrical items; hardware; plumbing and steam fittings; janitor supplies and equipment; kitchen supplies; paints and oils; automobile supplies; window glass; picture framing; small animals and their feed. Staple food and canned goods are a division of the warehouse.

Approximately 15,000 to 18,000 items are on our stock records. The inventory approximates \$125,000; food, \$25,000. The markup of stock items is 10 per cent, special items going through the warehouse accounts are handled on 2 per cent markup.

Receiving sheet (A) has four copies; requisition sheet (B), three copies; carloads of freight record (C) made for freight charges and demurrage.

such as a truck load of gravel. Food markup is 2 per cent.

University departments and divisions may have credit established at the warehouse through the purchasing agent, who as secretary of the appropriations committee and of the university cabinet has control of these accounts. The total of these departmental purchases is billed once a month by state code and department number and is sent to the P.A. who approves (or rejects) the bill based on the funds available and passes it on to the auditor who prepares it for payment by state warrant. This warrant is delivered to the warehouse for record, then deposited with the business office to the warehouse credit. This procedure is all subject to post-audit by the state examiner.

The purchasing agent is the only one at the university who can issue orders obligating state funds. In making our requisitions to the purchasing department, the warehouse is the same as any other department. The requisition date, the department number, the fund to be used and the delivery point (building and room number) are indicated on receiving department requisitions.

The amount of merchandise to be

purchased is based on the unit which will get the best discount; also enough must be purchased to last approximately three months. We try not to go over a six-month supply on any one item. We also have to consider the amount of storage space required and the availability of the commodity.

We give complete detail and catalog numbers. The suppliers who have served us best with the least cost get the business. We do not publish a catalog of items carried in stock. We do not give the detail price, just an approximate amount, as each time we purchase the price changes. If an item like white lead in oil cost \$7.25 per hundred pounds, the selling price stays the same until all is gone.

The warehouse has certain cover orders usually made for a three-month period and controlled by a definite amount of money, as gasoline, crushed stone, sand and cement, or repairs for stop watches. This method saves a number of special orders and gives quicker service.

The warehouse stock record card is a 5 by 8 inch visible record card, Form No. 6056-8. It shows at all times the commodity, supplier, university order, invoice date, unit cost, selling price, amount on hand. As

much detail on this card as is possible is maintained, *i.e.* in sheet metal, the size, gauge or equiv-decimal, the weight per sheet, number of sheets to the bundle, best unit to buy and location in the warehouse.

This stock on hand in the warehouse is available to all departments and divisions, under certain limits; critical material, such as electrical material used in departments other than physics and electrical engineering, must be approved by the service department.

The requisition or storeroom order is a 5 by 8 inch card: Form 1330 in original, 1330-D in duplicate, and 1330-T in triplicate.

The head of the department signs or delegates his signature. These orders are sent to us by campus mail and are brought to the counter by service department workers or departmental messengers.

Before the order is filled, complete detail is required so that our cost record system may be as accurate as possible. If the merchandise is carried away, the clerk who fills the order signs his name and the date of filling the order and gets the signature of the person receiving it. If the merchandise is to be delivered, the truck driver is required to get a signature which will constitute delivery.

If the card goes to the trucker for delivery, it is given a delivery number. This gives the stock clerk a record that assures him that all cards will be returned.

Each day these completed cards are priced and the total is then extend-

ed, deducted from stock on hand, and passed on to our bookkeeper for posting to the ledger account by state and university classification. We take a few emergency orders by phone.

In case of postage and sales tax receipts, a separate order in duplicate

is required (this helps us control this item). In general, the order may carry several classes of merchandise.

Orders prepared for delivery are packed and sealed in cartons, if possible, to facilitate handling. Departments that get copies of their pur-

Warehouse stock record card (D) ; storeroom order (E) ; food orders (F)

FOOD ORDER										
Date <u>19</u>										
Order Number _____										
Dept. No. _____										
Signed _____										
QUANTITY ORDERED	QUANTITY RECEIVED	UNIT	ITEM	BRAND	WEIGHT	QUALITY	PRICE ALLOWED	AMOUNT		
Form 1380-T Plant No. _____ Order No. _____ Bldg. _____ Date _____ 19 _____										
STORES DEPT.: Charge to _____ Deliver to _____										
To be used for _____ Head of Department _____										
AMOUNT	DESCRIPTION					PRICE	TOTAL			
	E									
THE OHIO STATE UNIVERSITY STOCK AND COST RECORD. ACME 7072-6										
DATE	FIRM	NUMBER	QUANTITY	RECORD OF INVOICES					SALE PRICES	
				DATE	QUANTITY	STOCK NO.	COST	UNIT	DEPT.	REGULAR
TRIPLICA										
Filled by _____										
D										
DESCRIPTION										
CATALOGUE NO.					UNIT	MAXIMUM	MINIMUM	LOCATION		
NO. OR SIZE					NAME					
NO. OR SIZE					NAME					
To Business Office										
Received by _____										

chases have this duplicate copy sent to them after the account is posted. The service department gets its building costs from this copy.

The warehouse cannot sell for cash. It does not sell to students. Their accounts are handled by the laboratory supply and the bookstore.

Food orders come to the warehouse on Form No. 4125 which is made in triplicate; one copy is retained by the dietitian, and the original and the duplicate come to us in a special handling envelope, used for food orders only. These orders get special handling by our campus mailing department.

As the order is filled by the food warehouse clerk, he prices the unit and extends the total, so that when the order is delivered the dietitian has the food cost, by unit and total, to be used in determining meal costs. Our hospital, the stadium clubs, Baker Hall, Oxley, Mack and Neil halls, Pomerene refectory, G.I. Village and College Road cafeteria and other smaller units are served from the central food warehouse.

TOOL ROOM

The director of the stores and receiving department is responsible for the tool room and its operation. Tools for this service are purchased on a special account, No. 2089. Tools are available to all departments, provided they are capable of handling them properly.

By having a service of this kind provided the university can cut down the number and expense of buying similar tools for every department, i.e. if our horticulture department has a large class using more shovels than those provided in the department, it is free to use the tools from our tool room. Tools purchased for this account are approved by the director of the physical plant, the purchasing agent, and the director.

SMALL ANIMALS ACCOUNT

A small animals account is maintained in the warehouse for the handling of small animals for the various laboratories. This building is located on the university poultry farm. Dogs, cats, rabbits, guinea pigs, rats and mice are cared for. Dogs and cats are purchased from licensed county dog wardens in units of five to twenty-five as needed. We have them on hand and deliver them on the date required. The departments have previously sub-

mitted their quarter's requirements with order cards in detail.

This division is responsible for keeping a line of rabbits for use in the genetics laboratory. We are required to have on hand sufficient feed for the various departments that have colonies of small animals to feed.

The expense of this division is prorated against the departments served.

The university is planning a new

service building, and we are looking forward to the time when we can have adequate space to care for the greater needs of the university. This will relieve our present crowded condition.

Any success of our present system of stores has been made possible by the cooperative efforts of the business office, purchasing department, and the service department.



OUR CAMPUS FIRE DEPARTMENT

THE ACQUISITION OF A WAR SURPLUS fire truck has provided St. Bonaventure College, St. Bonaventure, N. Y., with modern equipment to control campus fires. In consequence, it is one of the few small colleges in the nation to boast of its own fire department. The primary reason for the purchase was the increase in housing facilities on campus for married and single veterans. In all there are six single men's barracks, four barracks for married couples, and two temporary classrooms besides permanent buildings.

The nucleus of the department—strictly voluntary—is comprised of Franciscan Brothers augmented by students during school semesters. The latter are recruited from former servicemen with experience in this type of work. At present, a trial run of the fire crew is made at least once a week. Periodic checks through all buildings for inspection of fire extinguishers and standpipe hose are also made.

Chief of the crew is the Rev. Theophilus McNulty, O.F.M., of the physics department. He himself was a fireman for four years prior to entering the Franciscan Order, and his father is a retired fire chief of St. Petersburg, Fla.

The engine was purchased through the Rev. Fidelis O'Rourke, O.F.M., procurator, from Camp Shanks, Orangeburg, N. Y. The truck is a 500 gallon pumper and has 1200 feet of 1½ inch hose and 600 feet of 2½ inch hose. Also, it is equipped for foamite through a 160 gallon booster tank.

St. Bonaventure suffered a series of disastrous fires in the early '30s. The church, monastery and seminary were destroyed by fire in May 1930, while the farm buildings went up in flames in July of the same year. In April 1933 Lynch Hall was gutted after being struck by lightning.—JOHN RITZENTHALER, director of public relations, St. Bonaventure College.

THE FUNCTION OF COLLEGE KITCHENS, preparing food in quantity for college students, has not changed through the ages. The trend in planning them, however, is pointed in a new direction. Greater attention is being paid to scientific facts.

This attention has been stimulated by the significance of three points involved with food service: the esthetic and economic values of desirable food quality, the large proportion of the operation cost claimed by labor, and the size of the equipment investment. These present a challenge to those installing new kitchens and cause them to seek a scientific basis for their decisions.

Research in industrial management has pointed the way toward the kind of studies which the kitchen planners should make in order to plan wisely. It involves quality of output and efficient procedures that yield maximum results for minimum cost. It is increasingly recognized that the knowledge of how to bake a pie, build a house, or sell a dishwasher is helpful, but this information is not sufficient for planning a satisfactory kitchen.

Good plans are rarely made by a manager who knows only her own kitchen or by either an architect or a representative of an equipment company who is unfamiliar with the science of cookery and the organization of work in an institution kitchen. Consultations that bring together requisite information on building, equipment selection and installation and the essential values and procedures in food preparation and service should lead to good results.

The designing of an efficient layout is dependent upon:

1. An appreciation of the qualities and characteristics of food materials.
2. An understanding of the necessary functions of the food unit.
3. The ability to plan for a logical flow of work which will make mass production possible under effective cost and quality controls.

In this type of a food factory the "stock in trade" is classified under two headings, namely, food and service. The quality of each of these may be enhanced or destroyed and the operating cost raised or lowered through production plans that begin with the designing of the layout. Many factors will influence the plan for a specific unit, such

COMMON SENSE IN THE

MARGARET E. TERRELL

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as the menu pattern, the number served, the type of service, the length of the serving periods, and the amount and quality of the labor available.

Evidence has been furnished through cookery research as to the proper food preparation methods. The preservation of flavor, color, texture and nutritive elements through quick preparation and short holding time, for example, influences the selection of equipment. It has been found that preparing many foods in a huge mass not only results in awkward handling and irregular degrees of cooking but usually causes delicate foods to be mashed or deflated by the weight of the great volume. Garden

ployees should be saved, on the other hand, by having the supplies located in suitable relationship to their work units.

Temperature and humidity control and air circulation aid in the preservation of foods. Suitable temperatures for various foods vary from 5 to 50° F. The refrigeration load will be influenced by the nature and volume of the products, the temperature of the room, and the number of times the space is opened during use. Proper humidity will reduce the dehydration of foods. Air circulation makes for more uniform refrigeration and the elimination of stagnant odors.

Just as freezing compartments have found a popular use in home food preparation, freezing units are performing a useful service in institutions. The holding of frozen fruits and vegetables, the making of frozen salads and desserts, and the freezing of ice cubes help to increase the quality of food service.

Protection from waste and theft in a storeroom will depend to a large extent upon a convenient systematic arrangement and an easy, accurate method of receiving, recording and issuing supplies. Good scales will furnish a helpful control if they are conveniently located and faithfully used. The entrances to storage areas should be easily visible to the kitchen or supervisor's office for quick, convenient supervision.

There is a great range of needs in the various college units. Residence hall food service usually supplies only one menu choice. This means the preparation of few foods in large quantity. The college cafeteria may serve a larger number of people and offer a wide selection of foods. The result is the preparation of many items in smaller quantity. The dormitory meal at which a roast meat and baked potatoes are served requires a heavy oven load.

In the cafeteria, the roast meat and baked potatoes compete for choice with steamed, fried or boiled foods, and the load is less heavy on any one piece of cooking equipment in proportion to the



freshness, the perfection in preparation, and appealing temperatures and attractiveness when foods are served are values to be wisely guarded.

There are four general functions of institutional food units. They are the receiving and storing of raw materials and supplies, the manufacture of products, the merchandising of food, and the maintenance of plant, equipment and personnel.

The best usefulness of storage facilities depends upon accessibility, convenience, and the protection of materials from deterioration and unauthorized use. Delivery men may be a distraction to workers and require a large area for moving bulky items into storage. Storage space close to the delivery entrance is a solution for these problems. Time and steps of high salaried em-

Kitchen

number served. The coffee shop, with its short order type of preparation, requires a different plan of work and quite different equipment.

A study of the menu pattern, characteristics of the proposed service, and volume for a specific production unit will give indication of the requisite equipment. It will lead to an analysis of a desirable flow of work and will show the labor and equipment loads. It will give a basis for determining the number of persons to work in an area and the pieces and size of equipment needed.

The amount of piecework and the order of line production tend to vary with the size as well as the type of the unit. The complexity of duties is greatest when one person prepares the entire menu, as in a home. There is a decrease in the number of functions performed by one person as the quantity produced increases. For example, in a small unit one person may be employed to prepare all of the cooked foods; in a large one, just the desserts, and in a huge production, one person may be assigned to mix the cakes, another to scale the mixture into pans, and someone else to do the frosting. The equipment needs and arrangement and the space allowance will change correspondingly.

The flow of work should be in a right-hand, consecutive order. It should move from raw materials through the processing stages to finished products in a manner requiring the fewest motions, or labor effort and time. This means that pieces of equipment that are used together should be located near one another, with preference in the arrangement given to pieces most used.

Complications arise when the same equipment must be used by workers in more than one unit of production. For example, the baker, the cook and the salad maker may be required to use the same mixer. In the average kitchen the baker would use it most. It should be located, when this is the case, in close

proximity to her table and in such a fashion that the others can use it without entering her work unit or disturbing her unnecessarily.

Food is best at the point when preparation is completed. Freshness is an important characteristic of quality. This fact, combined with the patron's impatience for service, makes meal periods the peak-load hours of the day. Personnel is increased, work is speeded up, and a certain amount of tension exists. This may mean serving patrons quickly with food at its peak of goodness or it may lead to confusion and accidents that result in loss and slow service.

It is imperative that the design for this unit allow for simple, logical procedures. Short distance for service, adequate equipment for holding food, convenient arrangement, freedom from obstructions and cross traffic in the path of workers, and arrangement for easy supervision are features to seek in the layout for this unit.

The sanitary maintenance unit is the most unglamorous of the entire food department. Soiled dishes and equipment are unattractive. Garbage disposal is ugly. Wet mops, worn brooms and soap barrels are not beautiful. This unit, however, plays a vital role in guarding the health of the patrons. Previously, it was shoved into a dark corner and was given inadequate attention. The present trend is to put it into the limelight, both literally and figuratively. During labor shortage, dishwashers were coaxed onto the job under the title of sanitary engineers. A good light was turned on their dish tables in order that they could discover any condition that would mar the sparkling results of their efforts. Their salaries were stepped up, so that they are among the highest on the kitchen pay roll. Health studies have stressed the importance of the work they do.

The dishwashing room should be arranged to make possible the quick, quiet disposal of soiled dishes. The type and cost of service will influence location. It should be located near the waitresses' line of traffic if their duties include removal of dishes. It should be near the path to the exit if patrons are to return their own soiled dishes. Convenience and attractiveness are two important goals for soiled dish disposal. Thorough cleansing and protection from contamination are essential in proper maintenance.

Kitchen equipping is simplified when

the budget allowance permits freedom of choice in the selection of equipment and materials. There are few colleges where thoughts of economy are not of dominant necessity. The greatest benefit must be obtained for the money allowed. The equipment buyer, when informed about specific needs, must know the equipment available on the market that will best satisfy the needs. Initial cost is not the only consideration for economy. Cost of operation, daily care required, probable repair and replacement of parts, and the depreciation rate are to be considered also. These are balanced against the job to be done and how much such equipment will improve quality, increase returns and save on labor cost.

The expense for installation of equipment may vary. The best routing of work and saving on labor deserve prime consideration, but layouts often may be designed to economize on installation cost without interfering with an efficient work plan. Gas and steam lines, plumbing, hoods over cooking equipment may add materially to kitchen costs if the layout is not compact.

The likelihood of low labor turnover and productive work is greatest in a workshop that is comfortable and attractive. Working in beautiful, orderly surroundings gives satisfaction and stimulates an effort to attain high standards. There are four important ways by which careful planning may result in the protection of employees' energy for productive labor:

1. Through avoiding excess muscle fatigue caused by reaching, stooping, lifting, making extra steps, and standing or walking on hard, uneven and slick floors.
2. By eliminating nerve strain resulting from noise, confusion and bad lighting.
3. By invigorating them with good air, right temperatures and pleasant surroundings.
4. By preventing unnecessary work stoppage or distractions.

The generally accepted pattern for food goodness, wherever food is produced and served, is high quality home cooking. The style of service desirable is that used in well regulated homes. Alert educators who recognize the health factor of good food and the refining influence of genteel living acknowledge that college food service plays a significant role in education.

THE ROVING REPORTER

Library Goes to Dorms

A unique library is a new one at Drake University, Des Moines, Iowa. A special library fund has been established by John B. Griffing of Brazil in memory of his wife, May Kelley Griffing, a former Drake student who died in 1945.

The Griffing library fund brings books directly to students. Volumes in the collection have been placed in two of the dormitories, and in the coming months the service will be extended to the others.

The purpose of the fund is "to provide for the purchase of books and materials which may lead to the better understanding of other peoples and which may bring about more constructive thinking on world problems or on any new ideas or technics toward making a better world."

Only in rare instances may books that have been published more than two years be added to the collection. New books can be purchased at any time and in any number, not at a prescribed rate.

The books now available cover wide fields and varied interests. But all are selected to develop a sympathetic appreciation of the problems of all nationalities, to encourage tolerance and love of humanity, and to stimulate thinking on world betterment.

Film Library Moves

Transfer of the \$40,000 film library of the University of Georgia Division of General Extension from Atlanta to the Athens campus is proving a boon to university teaching personnel who desire audio-visual teaching aids.

The library, through Gerald D. Cauble, film librarian, has set up offices in Old College and has made available to faculty members opaque slides, filmstrips, 16 mm. educational motion pictures, wire recording machines, a projection room and operator, a detailed catalog of all films available, and instruction on the use of all equipment.

"Our aim is to furnish elementary and secondary schools, colleges and universities, civic groups, and local church

groups with our services," said Mr. Cauble. "We plan to sponsor classes for operators and to educate the public in methods of using various types of visual aids to their best advantage."

Within a month after the film library moved to Athens, it had shipped some 1357 films throughout the United States; these were seen by audiences totaling 116,000. On the campus alone, twenty-four showings were staged with an attendance of 411 students.

Fees are charged for films sent to points away from the university campus. Any profits realized above operating costs go for the purchase of additions to the library, which is already the largest in this region.

Campus Station

A new phase of education was inaugurated at the University of Notre Dame in January with the formal opening of Notre Dame's first official radio station.

Station WND, which is on the air from 5 to 7 p.m. daily, can be received only in buildings on the Notre Dame campus and operates under a provision of the Federal Communications Commission which provides for small, exclusive operations of this kind.

The station uses a "carrier current" type of transmitter designed and built by four radio enthusiasts attending Notre Dame. Funds for the project were supplied by the student activities council, and financial support is planned through the limited presentation of commercial programs.

They Type Their Exams

Exam-weary students with writer's cramp found a friend this year in James R. Naiden, English instructor at Rutgers University. His solution to the problem was:

Use a typewriter.

Mr. Naiden permitted the use of typewriters by members of his English literature class, which is composed mostly of journalism majors, men who are supposed to produce typewritten copy for publication.

For those students who could not concentrate while typewriters were bang-

ing away, Instructor Naiden acquired a separate room where the nontypists scrawled out their papers with pen and ink, as their fathers before them did.

Mr. Naiden is of the opinion that a typing test—showing the applicant's capability in that field—should be given along with every college entrance examination.

Not a Communist Plot

"The University of North Dakota is not trying to undermine U.S. foreign policy! All it wants to do is to erect a building."

That's the story Lloyd Stone, alumni director, has been telling the world since receiving a letter from a North Dakotan who confuses a fund-raising drive for a new student union building with an attempt to give financial aid to leftist student organizations.

The letter, bearing an R.F.D. return, recounts how happy the writer was when his daughter "Marthy" was graduated from the university, but how perturbed he is over the alumni office request for a contribution to the student union fund.

"Now as I say," the letter complains, "I ain't well educated but I read the papers every day and I listen to the radio when ever I have any spare time which ain't often. The USA right now is the middle of one of the durndest fights in its history to stop communism.

"We are spending millions of dollars of taxpayers money to keep them Reds from moving in on the rest of Europe. And you want us to give them money to get to hold right here in this country. Im not gonna do it and I wont let my Marthy do it neether.

"I know that back in the days when a nationally prominent figure was fooling around with this American Student Union that every one was saying they was ok and not so radicle.

"But for my money they got a dark pink tint to them and Im not gonna give them a speck of help. Im surprised that you people up at the state university are giving them aid and comfort. You better stick to teaching plain old USA democracy."

QUESTIONS AND ANSWERS

Student Labor

Question: How can student labor be utilized to the best interests of the college and the student?—F.K.B., Vt.

ANSWER: Student labor can be utilized to the best interest of the college and the student by:

1. Centralizing placements in one office where students file their qualifications and desires and faculty and administrative staff requisition according to the qualifications required for the job.

2. Whenever possible, placing students in the departments in which they are majoring. Close association with the instructors provided by such an arrangement is often worth more to the student than any pay check that may be earned.

3. Arranging working hours to fit schedules in such a manner that each working period is for as long a time as possible. Both the student and the school profit more through having the student work four three-hour periods during a week rather than twelve one-hour periods.

4. Controlling hours of employment to avoid any possible interference with maximum achievement in the student's academic work.

5. A pay scale geared to the quantity and quality of the work performed and the responsibility and judgment involved.—JOHN E. WOODS, director of student placement, University of Omaha.

Reserve Accounting

Question: What is the current practice among small colleges in accounting for reserves, including the accounting practice regarding capital improvements?—B.J.B., Fla.

ANSWER: Reserve accounting is frequently employed by small colleges when a year's operations reported on a favorable cash basis would create the impression upon a casually interested reader of financial reports that the college was "in the money." Moreover, endowment income stabilization reserves have in recent years been set up in many colleges as a partial answer to the uncertainty of continued high stock yields. During the war years

many small colleges set up reserves in recognition of abnormal financial operations, but today and for the foreseeable future one might wonder how any small institution can afford to indulge in reserve accounting beyond the point of utilizing funds which have already been established.

It is, without question, desirable to provide from current operations for as many deferred expenditures or capital improvements as possible, but how many small colleges find themselves in this enviable position?—BOARDMAN BUMP, comptroller, Mount Holyoke College.

Capitalizing Temporary Structures

Question: I should like to know the accounting procedures to be followed in respect to (1) F.P.H.A. projects; (2) F.W.A. buildings. Are they considered capital additions? If so, at what figure are they entered—as assets, actual cost, appraised value, or an arbitrary amount? If not considered capital additions, is the actual expense borne by the college treated as an operating expense, or, to that extent, are the projects considered capital additions?—B.P., Minn.

ANSWER: The answer to the question regarding the capitalizing of temporary structures provided by the federal government may depend in part upon the type of college or university involved. Privately controlled institutions may record these assets in their books of accounts at a nominal value in order to avoid distorting their financial statements during the relatively short period of time in which the buildings are to be used. Publicly controlled institutions may, on the other hand, be confronted with statutory requirements that result in the necessity of capitalizing expenditures that are made in connection with the erection of these temporary structures.

Contracts with the federal government involving the erection of temporary structures provide, in the main, that the title to the buildings shall be vested in the local body. It is obvious, therefore, that colleges and universities acquire a genuine asset. These contracts, however, also provide that the structures shall be removed when the emergency period has passed. It

would thus be wise to avoid over-capitalization.

Publicly controlled institutions might, therefore, capitalize that portion of the expense borne by the college or university and either ignore or capitalize at a very nominal value that portion of the cost borne by the federal government. This procedure will result in the least amount of distortion possible and still provide for compliance with statutory requirements.

It is difficult to generalize for all institutions in this temporary situation, but conservatism in capitalizing costs is considered to be the better practice. —R. B. STEWART, controller, Purdue University.

Unprofitable Enterprises

Question: Should auxiliary enterprises be discontinued if not profitable?—E.J.H., Va.

ANSWER: In general the answer is "yes." Instances may arise whereby a dining hall unit, a residence hall, or possibly an intercollegiate athletic program cannot regularly be operated on a break-even basis. In such cases the desirability of granting subsidy support conceivably should be given careful consideration, depending upon the educational value of the enterprise concerned.—W. EMERSON GENTZLER, bursar, Columbia University.

Research Work

Question: What is the place of a research laboratory in small colleges? Is there an obligation for such service?—T.W., N. J.

ANSWER: Research work in the small college fulfills a definite place and assists toward promoting a wholesome public relations job when: (1) the problem of research is one that applies to the community or area in which the college is located; (2) special skill of faculty, adequate equipment, and space are available for such studies, and (3) the administration, recognizing the value from such efforts, encourages participation by reducing teaching load and helping finance publication of results.—IRVINE WILSON, comptroller, University of Denver.

NEWS

Temporary Housing Bills Pigeonholed . . . Census of Jewish Students Released . . . Educators Oppose U.M.T. . . . A.C.E. Studies Tax Exemptions . . . Gifts to Education Decline . . . Columbia Employes Have Tuition Exemption Plan

Washington Correspondent: HELEN C. BROWN

Census of Jewish College Students Is Released

WASHINGTON, D.C.—B'nai B'rith Vocational Service Bureau has released the result of its decennial census of Jewish students in American and Canadian institutions of higher education.

The survey of 1533 institutions showed that more than 200,000 Jewish students are in college. This is nearly double the number in 1935 and represents 9 per cent of the total student body in all institutions.

More than half of all Jewish students attend colleges in New York City where Jews represent 41.5 per cent of the total population. Only 5.5 per cent of students are enrolled in institutions in New England, 4.8 per cent in those in Pacific states, and 4.5 per cent in South Atlantic states. Fifty institutions enroll 77 per cent of all Jewish students; of the 1533 colleges reporting, 476 enroll none.

In nearly all fields, comparison of enrollments in professional schools shows a sharp drop in the proportion, but not necessarily the actual number of Jewish students in 1946 as compared with 1935.

Those showing the sharpest decline are medicine and allied fields, law, business administration, fine arts, architecture and forestry. The number in engineering decreased 23 per cent. Fields that showed a considerable increase are: education, theology, library science, and nursing.

Oppose Regulation of Foreign Students

WASHINGTON, D.C.—The Immigration and Naturalization Service has issued regulations pertaining to visitors, including foreign students, to U.S.

Students admitted must, if they remain more than six months, supply a bond of \$500, and the regional officer of the Immigration Service has full authority to determine whether such extension shall be given. The foreign visitor must certify the purpose of his coming to the United States and is subject to deportation if he does anything interpreted by the immigration officer as not in keeping with the certified purpose. He is prevented also from making public addresses except as prior approval is given by the Immigration Service.

Under the Fulbright and Mundt acts, there will be a sharp increase in the number of foreign students. Organizations interested in these programs are seeking to procure modifications as they pertain to bona fide students.

U.M.T. Opposed by Three Educators in Four

WASHINGTON, D.C.—Nearly three educators in four oppose universal military training. The final tabulations of a questionnaire on universal military training circulated by four national educational associations show that 73 per cent of the more than 3600 who replied do not regard universal military training as an essential to national security.

The American Association of University Professors, the American Council on Education, American Vocational Association, and the National Association of Secondary School Principals made use of an identical questionnaire in order to analyze the opinion of educators on this controversial issue.

Only 33 per cent of the secondary school principals, 26.7 per cent of the university professors, 23.2 per cent of the vocational educators, and 23 per cent of the college presidents are in favor of universal military training as proposed in pending legislation.

Temporary Housing Transfer Urged for This Session

WASHINGTON, D.C.—The National Housing Administration has reported adversely on the several bills introduced into this Congress to transfer title and operation of temporary housing to the colleges and universities. As a result, the bills are now pigeonholed in the House committee on public works and the Senate committee on banking and currency.

However, steps are being taken by the housing committee of the American Council on Education in cooperation with the Association of Land-Grant Colleges and Universities and other educational groups to procure such transfer during this session.

Some \$220,000,000 of federal funds was spent under Title V of the Lanham Act to provide temporary housing for college students. The existing law makes it mandatory, except through permissive action by the administrator of N.H.A., to demolish or remove all such housing by July 25, 1949. Many institutions are contemplating remodeling the structures for semi-permanent occupancy, and relatively few colleges could continue their present enrollments without retaining the temporary buildings long enough to provide permanent dormitories.

It is a complicated problem, however, since there is considerable question as to whether the federal government should give permanent title to institutions of higher education and not also transfer temporary housing provided to local communities. Fear is expressed that the transfer to municipalities would result in federally constructed slum areas, since the transfer would remove them from the demolition clause of the Lanham Act.

Board of Foreign Scholarships Issues First Regulations

WASHINGTON, D.C.—The first broad rules governing the selection of American students, teachers and specialists for study abroad under the Fulbright Act have been announced by the Board of Foreign Scholarships.

Although final selection will be made by the State Department, responsibility for initial screening of applications has been assigned to other agencies. The Institute of International Education will screen prospective students desiring to go abroad. Those wishing to teach in foreign elementary and secondary schools will be screened by the U.S. Office of Education. Teachers for American elementary and secondary schools abroad, all teachers in institutions of higher education, and graduate students and post-doctoral specialists will be screened by the Conference Board of the American Council of Learned Societies, American Council on Education, National Research Council, and Social Science Research Council. The Conference Board has established a special staff as applications are being received in relatively large numbers.

Grants will normally be for one year and will include tuition, or salary, maintenance and travel expenses. Candidates will be selected generally on the basis of excellence of scholastic and professional experience, except that preference will be given to veterans of World Wars I and II. Applicants will also be expected to demonstrate a proficiency in the language of the country to which they go if it is essential to the project they propose to undertake.

Application forms and further information can be procured from the Division of International Exchange, Department of State, Washington 25, D.C.

Colleges Urged to Get Needed Surplus Property

WASHINGTON, D.C.—Approximately \$600,000,000 surplus other-than-real property is still available through the War Assets Administration. In the procurement of such personal property educational institutions have priority and are entitled to 95 per cent discount of fair value.

It is unlikely that Congress will extend W.A.A., which is due to expire on June 30. There are two possibilities:

either Congress must enact new legislation authorizing transfer to some other governmental agency or the President will issue an executive order providing for such transfer.

There is considerable question as to whether Congress will have either the time or the inclination to pass legislation, since it would entail a decision as to retention of the "priority bands" and discounts to educational and health agencies. If the transfer is made by executive order it now seems clear that the Federal Works Agency will be given the responsibility for disposal of all surplus remaining on June 30.

The uncertainties in the picture after June 30 make it important that schools and colleges seek immediately, through the channels already developed, to procure such surplus as they need.

A.C.E. Begins Study of Tax Exemptions

WASHINGTON, D.C.—The American Council on Education has initiated a nationwide study of the tax structure as it relates to colleges and universities.

Recent hearings held by the House ways and means committee on the exemption of institutions of higher education from federal corporation taxes indicated that the present tax-exempt status of eleemosynary institutions, including education, is being seriously challenged. In the preparation of testimony before the House committee, it was apparent that facts are not now available as to specific sources of income of colleges and universities or the extent or nature of income-producing activities, other than instruction, in which institutions engage.

The first step in the study will be to procure detailed information regarding such activities and the amount of income derived from them. On February 9, the council sent a questionnaire to all institutions of higher education. Those that receive income from sources other than "student fees, tax sources, market investments, and gifts for general support" are requested to supply sufficient facts to indicate the extent and nature of such other sources.

The study is under the general supervision of the council's committee on the study of tax exemption of which Carter Davidson, president of Union College, is chairman. R. B. Stewart, vice president and controller, Purdue University, is the director of studies.

Columbia Announces Tuition Exemption Plan for Employees

NEW YORK, N.Y.—Columbia University has adopted a "tuition exemption plan" that permits full time, non-academic employees to enroll for courses for which they may be qualified, according to Dr. Frank D. Fackenthal.

The plan, to be administered by the university personnel committee, was approved at a recent meeting of the trustees. About 3000 employees of all categories are included. Among them are buildings and grounds employees, residence halls and dining halls staffs, clerical workers, and laboratory employees. Teachers College already has in operation a similar plan.

Courses open to the employees under the new plan, provided they qualify scholastically for admission, include those of the school of general studies, and the nonprofessional graduate faculties. Applications must be approved by the head of the employing department. The academic work will be restricted to three points for the first semester of employment, with a maximum of six points thereafter.

Courses are to be taken outside of scheduled working hours except when authorized by the department head as a direct contribution to the employee's work. The exemption does not include special fee courses, laboratory courses in the physical sciences, field trip courses and courses having limited enrollment.

Labor Education Urged

WASHINGTON, D.C.—The Senate committee on labor and public welfare has held hearings on the "Labor Extension Act of 1947," introduced by Senators Thomas of Utah and Morse of Oregon. If enacted, the legislation would authorize the Department of Labor to set up an extension division similar to that now conducted in the field of agriculture by that department. The extension division would allocate funds on a grant-in-aid basis to permit state educational institutions to make available to workers information on collective bargaining, production, labor legislation, and good labor-management relations. The division would also establish standards for such instruction, but the responsibility for operation of the program would rest with the local educational institution.

NEWS

Germany Gets "Little University of Chicago"

CHICAGO.—A little University of Chicago in Germany will be set up at the University of Frankfurt this spring to help reestablish cooperation between higher education in Germany and the United States, Chancellor Robert M. Hutchins announced recently.

A two-year project in which an exchange of professors is planned for the future, the University of Chicago unit will be financed by a \$120,000 grant from the Rockefeller Foundation and an equal amount from the university.

"The presence of a group of American scholars at the University of Frankfurt and the possible exchange of similar groups of German professors will help to reestablish the interchange of ideas by reopening channels of communication between German and American universities," Chancellor Hutchins stated in announcing the program.

From six to ten faculty members from the University of Chicago will teach at Frankfurt, beginning with the spring quarter opening this April. Appointees will teach one semester, or approximately four months, and will be replaced by other staff members so that a group of professors will be stationed continuously at Frankfurt for the two-year period.

Personnel sent to Germany will be regular University of Chicago faculty members who volunteer for the service, selected primarily from the fields of social sciences and the humanities.

The curriculum of the University of Chicago unit will include: American culture and history, English language and literature, sociology, political science, psychology, American public law, international law, and philosophy.

Flight Training Policy Is Reaffirmed

WASHINGTON, D.C.—The Veterans Administration has ruled that veterans taking flight training as an elective must pay for such training by accelerating the use of their time entitlement.

This policy was announced last September but because both institutions and veterans had initiated flight training prior to the issuance of the new policy, the effective date was postponed to the beginning of the second quarter or term. Efforts have been made to modify the policy since it, in effect, authorizes the V.A. to determine when a

subject is part of "a course" and when it is "free elective."

If flight training is a part of the course of training or education, as in aviation engineering, it is paid for by the V.A. on the same basis as other courses. When it is considered an elective, the payment for it can be only through forfeiting time entitlement, even though the total tuition would be within the legal limit of \$500 for a school year.

International Seminar Set for Late May

WASHINGTON, D.C.—The first international educational seminar to be held in the United States since the war will be held at College Park, Md., beginning May 23. The seminar will be directed by Dean Harold Benjamin of the University of Maryland.

Participants will include an approximate 35 educational leaders of a dozen war-devastated countries in Europe and Asia. These leaders are being brought to the United States for the Commission for International Educational Reconstruction's cooperative project in international education.

Besides attending the four weeks' seminar, the foreign educators will observe American schools, teachers colleges and universities, attend educational conferences and summer sessions, and return home in September.

P.L. 16 Rules Eased

WASHINGTON, D.C.—The Veterans Administration has announced that any seriously disabled veteran who is unable to devote as many hours to training as the ordinary veteran trainee does may now still qualify for full time training status under specific conditions. These conditions are: that he is in training as many hours as the medical consultant determines his disability will permit, and that there is reasonable expectancy that his work tolerance will increase within three months after he goes on the full time status.

Would End Segregation

WASHINGTON, D.C.—Bills have been introduced into both the Senate and House aimed to end "any distinction, discrimination or restriction on account of race, color or creed or for any reason not sanctioned by law and not applicable alike to persons generally" in the District of Columbia.

Building Problems of Urban Universities Covered in Bulletin

WASHINGTON, D.C.—An 80 page bulletin, entitled "Building Problems of Urban Universities," has been published recently by the American Council on Education.

Edited by Herbert C. Hunsaker, director of Cleveland College, it is a report of the national conference sponsored jointly by the Association of Urban Universities, Western Reserve University, and the American Council on Education which was held last May in Cleveland.

The conference discussed three major areas: the probable extent of the need for buildings; sources of funds, and the development of means to assure most effective building programs.

Assuming an enrollment of 3,000,000 students by 1950, there is need for a 100 per cent increase in the physical plant of colleges and universities over that of 1940. The U.S. Office of Education estimates that 300,000,000 additional square feet of floor space will be needed. This will mean a capital outlay of between \$5,000,000,000 and \$8,000,000,000, depending on trends in building costs.

In discussing sources of funds, there was general agreement that the federal government will need to supplement private funds and appropriation from local and state taxes. One form of federal assistance available to publicly controlled institutions is assistance in advanced planning and architectural designing.

Another potential source of aid is that of turning over temporary housing to the institutions of higher education. The hope was expressed that such assistance might be supplemented by direct appropriation but without decreasing the responsibility of the community and the state.

Several proposals were made for the development of means to assume effective building programs. These include: employment of experts to work on a continuing basis with administrative and faculty committees on planning the physical plant; closer cooperation among the institutions, and the establishment of a national clearing-house type of service on planning and construction to be developed by the American Council on Education.

Minnesota Has Model of Navy Water Tunnel

MINNEAPOLIS.—Recently completed and now undergoing tests in the St. Anthony Falls hydraulic laboratory at the University of Minnesota is a high speed circulating water tunnel, a one-tenth scale pilot model of the huge test tunnel the navy proposes to develop at its David Taylor Model Basin near Washington, D.C.

Sponsored by the navy bureau of ships through a \$100,000 grant to the university laboratory for studies of the flow diversion of fluids, the design and construction of the pilot model tunnel have been under way since 1946.

Dr. Lorenz G. Straub, director of the laboratory, explains that a water tunnel is an especially designed closed conduit system containing a continuously circulating stream of water forced through the system by an electric pump.

Models of various types of undersea crafts and missiles will be tested in the large tunnel when it is completed at the David Taylor basin. The university's scale model is intended primarily for use in pre-determining the flow characteristics of the proposed large tunnel and to provide leads to possible improvement of the design. The model also will be used to study improvements in the design of existing water tunnels.

This project, according to Dr. Straub, marks the first time that a model water tunnel has been built to establish the final controlling design features on a large test tunnel.

N.Y. City Colleges Seek Private Gifts

NEW YORK, N.Y.—The four city colleges of New York City are planning to ask the public for \$525,000 annually for extrabudgetary needs, according to a report released by the administrative councils of the schools. The presidents of the four colleges, Dr. Harry N. Wright of City College, Dr. George N. Shuster of Hunter, Dr. Harry Gideonse of Brooklyn and Acting President Margaret V. Kiely of Queens, constitute the personnel of the council.

The fund would go toward providing students with special services not available under the present municipal budget. These include personal counseling, student centers, placement offices in each school, scholarships and fellowships.

This is the first time in the history of the four colleges that they have approached the public for private gifts to supplement municipal funds.

Regional College Pact Signed by Governors

WASHINGTON, D.C.—Governors of nine states have signed an agreement to establish and operate colleges for the specialized and professional education of southern youth.

The pact was signed by the governors of Alabama, Arkansas, Georgia, Texas, Florida, Mississippi, Maryland, Tennessee and South Carolina. Governors of Louisiana, Kentucky, North Carolina, Oklahoma, Virginia and West Virginia were not present at the conference, but it is expected that they will also participate in the regional plan. The plan must be ratified by the legislators of at least six states and approved by Congress before it can be put into operation. In the meantime, a regional council will make a survey of southern educational facilities and needs.

If the plan is ratified, each state will provide funds in proportion to its population for a common pool from which regional institutions will be financed. Provision will be made for both white and Negro institutions. The governors called the new step "one of the century's most significant developments in higher education."

Chicago Orders Big Magnet

CHICAGO.—University of Chicago announces placement of an order with the Bethlehem Steel Company for a 4,140,000 pound magnet which will constitute the heart of the new cyclotron being built at the university. The new cyclotron is an integral part of the university's \$12,000,000 atomic research program. The new equipment, weighing 2550 tons, will dwarf the present 80 ton cyclotron.

Two Junior College Aids

WASHINGTON, D.C.—The American Association of Junior Colleges has issued two pamphlets, "How to Organize and Operate a Junior College" and "American Association of Junior Colleges—What It Is and What It Does." Both have been prepared by Jesse P. Bogue, executive secretary, and can be procured on request to the Association, 1201 Nineteenth Street, N.W., Washington 6, D.C.

Gifts to Education Decline Compared to Public Welfare Total

WASHINGTON, D.C.—An analysis of the changes in private gifts and grants to colleges and universities is made in "Financing Higher Education," the fifth volume of the report of the President's Commission on Higher Education.

In 1920, only 3 per cent of such funds were given to publicly controlled institutions; in 1940, 14 per cent.

A continuing tendency is also reported for a large proportion of gifts to be made to large institutions. In 1940 two-thirds of all endowment funds were held by 46 universities enrolling only 15 per cent of the total number of students.

While there have been substantial increases in gifts to colleges and universities, such gifts have not kept pace with the increase in enrollments, nor has education received as large a share as formerly of the total gifts to public welfare.

One hopeful factor, the report finds, is that 72 per cent of gifts to higher education now come from persons with annual incomes of \$5000 or less.

Columbia Tech Dispute Is Settled

WASHINGTON, D.C.—After weeks of dispute, all the 400 veterans who are day students at the Columbia Technical Institute in Washington, D.C., have returned to their classes.

Columbia Technical Institute is a private institution operating for profit. Prior to renegotiating the contract with the institute, the V.A. asked for a financial statement to be assured the fees being paid for veterans were not in excess of the 10 per cent profit provided to schools operating on a commercial basis. The institute refused to provide such a statement and the V.A. refused to renew its contract.

A compromise was reached in which the V.A. contracted to pay the established fees for full time veteran students for the balance of the current year in order to avoid interrupting the veterans' programs in midyear. The contract for part time students was not renewed since the proposed fees were in excess of the \$500 per year.

Both the V.A. and the institute assert they would welcome a congressional investigation.

NEWS

Illinois Tech Research Program Jumps Ahead

CHICAGO.—A gross volume of \$2,500,000 in research business for the 1946-47 fiscal year has been reported by Armour Research Foundation of Illinois Institute of Technology.

"Partners in Research," the foundation's 11th annual report, shows a 34.6 per cent increase over 1945-46, the greatest increase in annual gross research volume since the organization was founded in 1937. In its first year of operation, the gross volume was \$45,000.

The Research Foundation is a non-profit organization established to render a research and engineering service to industry.

Sponsored research business in all three of the foundation's divisions showed an increase over last year's projects, according to the report. Armour's three divisions are the research division, the international division and the magnetic recorder division.

A total of 214 sponsored research projects processed during the fiscal year ranged from the development of a method of counter-gravity casting of metals to measuring the tensile strength of oil.

Cornell to Have Trustees Emeriti

ITHACA, N. Y.—The board of trustees of Cornell University announced recently the establishment of the title of "trustee emeritus" to honor retired members of the board who have given outstanding service to the university.

Retiring or retired members who have served "with distinction" for a minimum aggregate of fifteen years will be eligible for election. With the exception of voting rights, they will have all the privileges of active trustees.

Fake Degrees From Mount Vernon Scored

WASHINGTON, D.C.—At a hearing before the Federal Trade Commission, an undertaker and five clergymen stated they had been awarded honorary degrees by Mount Vernon University of Washington, D.C.

The degrees, procured for \$50 each, included honorary bachelor of theology, doctor of philosophy; doctor of law, and an honorary degree in humanity. A radio operator stated that he had been

sent a degree by mail, but that he neither accepted it nor sent the \$50 requested. One of the recipients said he did not know he was listed as a member of the board of directors until told by the F.T.C. investigator.

Further hearings will be held in Atlanta and in Tampa where the institution claims it has a seminary.

Seton Hall Largest Catholic College in U. S.

SOUTH ORANGE, N. J.—Seton Hall College, with a record enrollment of 7981 students, has since the war's end become the largest Catholic college in the United States, according to a survey conducted by the college's department of public relations.

On the South Orange campus, 4114 undergraduates are enrolled, with a record enrollment of 2835 students at the Newark division and with 1032 at the Jersey City extension. Fifty-seven per cent of the student enrollment is veterans.

Only 48 per cent of the freshmen registrants are veterans, a decrease of 26 per cent over last semester.

Beg Your Pardon

In the January issue of COLLEGE AND UNIVERSITY BUSINESS a news story with a Washington date line indicated that Rotary International was one of 50 organizations reported to have endorsed universal military training. The decision to take such action was reported to have taken place at a meeting called by Owen J. Roberts, retired U. S. Supreme Court justice, for the purpose of organizing the National Security Commission. The information was not correct. Officials of Rotary International state that the organization does not authorize official representatives at meetings of this type and that it declined to accept the invitation tendered by Justice Roberts.

New Salary Schedule

CARLISLE, PA.—Under a new schedule adopted by the Dickinson College board, a minimum of \$2000 will be paid to instructors and a maximum of \$7000 for full professors, President William W. Edel announces. The schedule, effective July 1, provides for the full professors with \$4500-\$7000; associate professors, \$3500-\$5000; assistant professors, \$3000-\$4000; instructors, \$2000-\$3500. Teaching assistants will receive \$1200-\$2000.

Student Union Bonds Sold on Open Market

GRAND FORKS, N. D.—A \$350,000 bond issue to help finance the University of North Dakota student union building was bought in open bidding by two Twin City bond houses at a special meeting of the state board of education in Bismarck. Kalman and Co., Minneapolis, and the Milwaukee Co. of St. Paul were successful bidders with a bid of 3.21 per cent interest.

The difference between the estimated cost of \$500,000 of the proposed building and the amount of the bond issue is being made up by the union corporation through a fund campaign among students, alumni and friends of the university. This drive has raised more than \$100,000.

The bonds are tax exempt and do not constitute an obligation against the state of North Dakota. Principal source of income for payment of the bonds is the student union fee of \$5 a semester and \$2.50 for summer school, which will bring in \$29,500 in 1948, according to estimates.

Evansville to Adopt Quarter System

EVANSVILLE, IND.—In September Evansville College will abandon the semester system in favor of quarters. After six months' study, the faculty almost unanimously agreed that: (1) students concentrate better on a limited number of subjects; (2) continuity is better in any given subject when the class meets oftener; (3) spring and Christmas vacations are less disruptive to students' work when they come between terms; (4) the cooperative college-industry plan in industrial technology education is best fitted into a four-term year.

The evening college, in which almost as many students are enrolled as are in regular day courses, will change to quarters too.

To Get Jobs for Graduates

WASHINGTON, D.C.—The United States Employment Service and the American Council on Education have plans that will improve the employment opportunities of veterans and other students upon graduation from college. The program will supplement existing placement services conducted by the colleges.

NAMES IN THE NEWS

J. Ollie Edmunds of Jacksonville, Fla., an attorney, recently assumed duties as president of John B. Stetson University at DeLand, Fla. He succeeded



Dr. William S. Allen, who resigned last September because of illness. During student days at Stetson University, Mr. Edmunds worked as a college waiter and janitor to finance his education.

John M. Gallalee, head of the department of mechanical engineering at the University of Alabama, has been named to the presidency to succeed *Dr. Raymond Ross Paty*, now chancellor of the University System of Georgia.



Dr. William R. Ross, professor of education and superintendent of buildings and grounds at Colorado State College of Education, has been named presi-

dent to succeed *Dr. George Willard Frasier*, who announced his retirement last April. Dr. Frasier, after an extensive leave of absence to enjoy a vacation, will return to the college in June as professor of education.

Richard H. McFeely, headmaster of Friends' Central School in Philadelphia, has been appointed principal of the George School in Pennsylvania. He will succeed *Dr. George A. Walton*, who has held the principalship at George School for forty years.

*George F. Ro-
galsky*, treasurer of Cornell University, has been named vice president of business, in a new alignment of administrative responsibilities. *Lewis H. Durland*, assistant treasurer, becomes treasurer. *Raymond F. Howes*, administrative assistant to the president, is now secretary of the university.



John S. Allen, director of the division of higher education for the New York

Lawrence Tech Buys 86 Acre Campus

DETROIT.—Lawrence Institute of Technology has purchased the 86 acre Lawrence Clinton estate for approximately \$250,000 as the site for its permanent campus, President E. George Lawrence announced recently.

The new campus will be on Eight Mile Road, bordered by James Couzens Highway on the west and Greenfield Road on the east. The land is partly wooded.

It is probable that some building will begin this spring for completion next fall.

"Present high building costs and lack of materials limit the amount of construction at this time," President Lawrence said. "However, it is expected that sufficient floor space will be available within the year to move the entire college to this new location."

The institute has been located in Highland Park, Mich., since its founding in 1932 by the late Dean Russell E. Lawrence, brother of the present engineering college head.

No Hard Drinks in Ohio State Union

COLUMBUS, OHIO.—Sale of alcoholic beverages will not be permitted in the proposed new Ohio Union at Ohio State University. Members of the board of trustees unanimously agreed on this.

Suggestions for such an installation arose out of a student poll several months ago covering 52 kinds of facilities and rooms that might be incorporated into the union. A proportionately large number of student replies favored installation of a *rathskeller*.

President Howard L. Bevis informed the trustees that funds will not be available for the entire list of items mentioned in the student poll and that selections will have to be made.

Food Service Directors to Meet in Cleveland

NEW YORK CITY.—College and university food service directors will be in attendance at a special session for college personnel at the National Restaurant Association convention in Cleveland on Wednesday afternoon, April 14. Joseph P. Nye, assistant director of university dining halls at Columbia University, is chairman of the college section.

Others who will appear on the pro-

gram include Milton R. Shaw, manager of residential halls at Cornell University; Nellie Gleason, director of foods at Grinnell College; Theodore W. Minah, director of dining halls at Duke University, and Harold W. Herman, managing editor of *COLLEGE AND UNIVERSITY BUSINESS*.

Dickinson Would Change Name and Status

WILLIAMSPORT, PA.—Dickinson Junior College is celebrating its 100th anniversary this year. Originally founded as Williamsport Academy in 1812, it was reorganized as Dickinson Seminary in 1848. In 1929 it was established as a junior college by the commonwealth of Pennsylvania.

Now its board of trustees has petitioned the state council of education for the right to change its name to Lycoming College and to inaugurate a four-year curriculum. To increase its endowment it is now in the midst of a campaign to raise \$500,000.

Oklahoma Residence Halls

NORMAN, OKLA.—University of Oklahoma officials announced a construction program that will provide four residence halls to house an additional 832 women students. The residence halls will be built in rectangular fashion with a dining hall in the center. The board of regents recently approved the sale of \$2,400,000 in self-liquidating bonds to finance these improvements in residential halls.

1947-48 Directory Out

WASHINGTON, D.C.—The U.S. Office of Education has issued its 1947-48 "Directory of Higher Education." Approximately 1700 colleges, universities and technical schools are included. Copies are available for 30 cents each through the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Aid to Foreign Students

WASHINGTON, D.C.—The World Student Service Fund is currently campaigning in colleges and universities across America for \$1,000,000 to aid university students and teachers in the war-torn countries of the world. In the past, the W.S.S.F. has helped more than 400,000 students; this year, the need remains as great or greater than ever before.

NEWS

State Education Department, has been appointed vice president of the University of Florida.



Alvin C. Eurich, vice president of Stanford University, has been named acting president pending selection of a successor to the late Dr. Donald B. Tresidder. Dr. Eurich has been vice president since 1944.

Byron James Green, industrial and municipal auditor in Michigan, has been named assistant controller at the University of Michigan. Prior to his work in industrial auditing, Mr. Green served as city auditor of Grand Rapids from 1929 to 1941.

Dr. Winfred G. Leutner, president of Western Reserve University, has announced that he plans to retire as soon

as a successor can be appointed. He will reach the retirement age of 70 on March 1, 1949, but has urged the university board of trustees to find a successor before that time.

John K. Selleck, formerly controller of the University of Nebraska, has been named business manager. The university has reorganized its operating and maintenance activities into four divisions, responsible to the business manager. The reorganization was occasioned by the death of *Lawrence F. Seaton*, operating superintendent, early in January. All activities of a business nature had been centralized in his office. The new director of purchasing and procurement is *Carl A. Donaldson*; buildings and grounds, *James S. Blackman*. *W. C. Harper* has been named director of commercial enterprises.



Arthur S. Adams, provost of Cornell University, has been elected president of the University of New Hampshire. He succeeds *Dr. Harold W. Stoke*, who resigned some months ago to accept appointment as president of Louisiana State University. Dr. Adams served as general administrator of the navy's training program during World War II.



Dr. Oliver S. Ikenberry, school administrator, writer, teacher and counselor, was recently installed as president of Shepherd College at Shepherdstown, W.Va. He is 40 years old.



Dr. Norman A. M. MacKenzie, president of the University of British Columbia, has been named a trustee of the Teachers Insurance and Annuity Association.

Since a number of Canadian colleges and universities have T.I.A.A. retirement and life insurance plans covering their staff members, it is the association's policy to have at least one Canadian trustee on the board.

A. Hollis Edens, vice chancellor of the regents of the University System of Georgia, has been appointed associate director of the General Education Board in New York City.



Dr. J. E. Hobson, former director of Armour Research Foundation of the Illinois Institute of Technology, is the new director of the Stanford Research Institute. Dr. Hobson is 36 years of age. In 1940 he received the Eta Kappa Nu award as "the outstanding young electrical engineer of the United States."

Dr. James L. McConaughy, governor of Connecticut and former president of Wesleyan University of Connecticut and at one time president of Knox College, died March 7 at the age of 60 years.

DIRECTORY OF ASSOCIATIONS

Associations of College and University Business Officers

Central Association

President: *T. E. Blackwell*, Washington University; secretary-treasurer: *L. R. Lund*, University of Minnesota.

Convention: May 17, 18, Hotel Chase, St. Louis.

Eastern Association

President: *Henry W. Herzog*, George Washington University; secretary-treasurer: *Boardman Bump*, Mount Holyoke College.

Southern Association

President: *George R. Kavanaugh*, Berea College; secretary-treasurer: *Gerald D. Henderson*, Vanderbilt University.

Convention: April 23, 24, Hotel Tutweiler, Birmingham.

Western Association

President: *William Norton*, University of California; secretary-treasurer: *William Brand*, Stanford University.

Convention: April 25-27, University of Washington, Seattle.

Schools for Negroes

President: *V. D. Johnston*, Howard University; secretary: *L. H. Foster Jr.*, Tuskegee Institute.

Educational Buyers Association

President: *Gerald D. Henderson*, Vanderbilt University; executive secretary: *Bert C. Ahrens*, 45 Astor Place, New York, N.Y.

Convention: May 5-8, Deshler-Wallick Hotel, Columbus, Ohio.

Association of Superintendents of Buildings and Grounds of Universities and Colleges

President: *Paul H. Elleman*, Ohio State University; secretary-treasurer: *A. F. Galistel*, University of Wisconsin.

Convention: May 10-12, University of Minnesota, Minneapolis.

Association of College Unions

President: *Douglas O. Woodruff*, University of Utah; secretary-treasurer: *Edgar A. Whiting*, Cornell University; editor: *Porter Butts*, University of Wisconsin.

Convention: April 29-May 1, Roanoke Hotel, Roanoke, Va.

American College Public Relations Association

President: *Horace Renegar*, Tulane University; secretary-treasurer: *Max E. Hannum*, Franklin and Marshall College.

Convention: June 23-27, Denver, E. D. Whittlesey, University of Denver, convention secretary.

National Association of College Stores

President: *A. W. Littlefield*, Barnes and Noble, Inc., New York, N.Y.; executive secretary: *Russell Reynolds*, 189 West Madison Street, Chicago.

Convention: April 19-21, Hotel Pennsylvania, New York City.

PRODUCT INFORMATION

Information on the materials, equipment and supplies with which an institution is built, operated and maintained and which are used in its various departments is of vital interest to those charged with the business operation. College and University Business recognizes the importance of this information and believes it has rendered a real service by grouping manufacturers' announcements and new product descriptions into a separate part of the magazine. We believe this is an infinitely better plan than to mix such information through the editorial pages where it becomes obscure and confusing.

You will find manufacturers' advertisements from pages 41-69. Pages 70-72 contain descriptions of new products and items of interest. Further details on any product advertised or described may be obtained without obligation and with a minimum of effort by use of the postcard below.

USE THIS
CARD

This card is detachable and is provided for your convenience in obtaining information on all items advertised in this issue or described in the "What's New" section. See reverse side.

Index to "What's New"

Pages 70-72

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Da-Lite Model C Floor Stand
883 Seco Company, Inc.
Seco-Superex Fountain Line
884 Bell & Howell Co.
16 mm. Camera
885 Westinghouse Electric Corp.
Westinghouse Water Coolers
886 Zenith Electric Co.
Program Timer
887 Thermo Cuber Co., Inc.
SanFrann "400" Dishwasher
888 Victor Animatograph Corp.
Sonomaster Record Player
889 Vestal, Inc.
Vestal Wax Remover
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Paging and Intercom System
891 Truscon Laboratories
Paratex Wall Coating
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Sperzel Toilet Seat

Key

- 893 Fairchild Camera and Instrument Corp.
Fairchild Console Recorder
894 Mealpack Corporation of America
Mealpack Tray Cart
895 The Wilbur & Williams Co.
Skid-less Floor Enamel
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"Cloth Fabric Identification"
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899 Executone, Inc.
"Sound...A Modern Control System"
900 Electric-Aire Engineering Corp.
Folder on Automatic Hand Dryer

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906	Talk-A-Phone Co. Catalog
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909	D. Appleton-Century-Crofts, Inc. Merger
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912	The March of Time Selling Policy
913	Pittsburgh Corning Corp. Plant at Sedalia, Mo.
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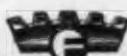
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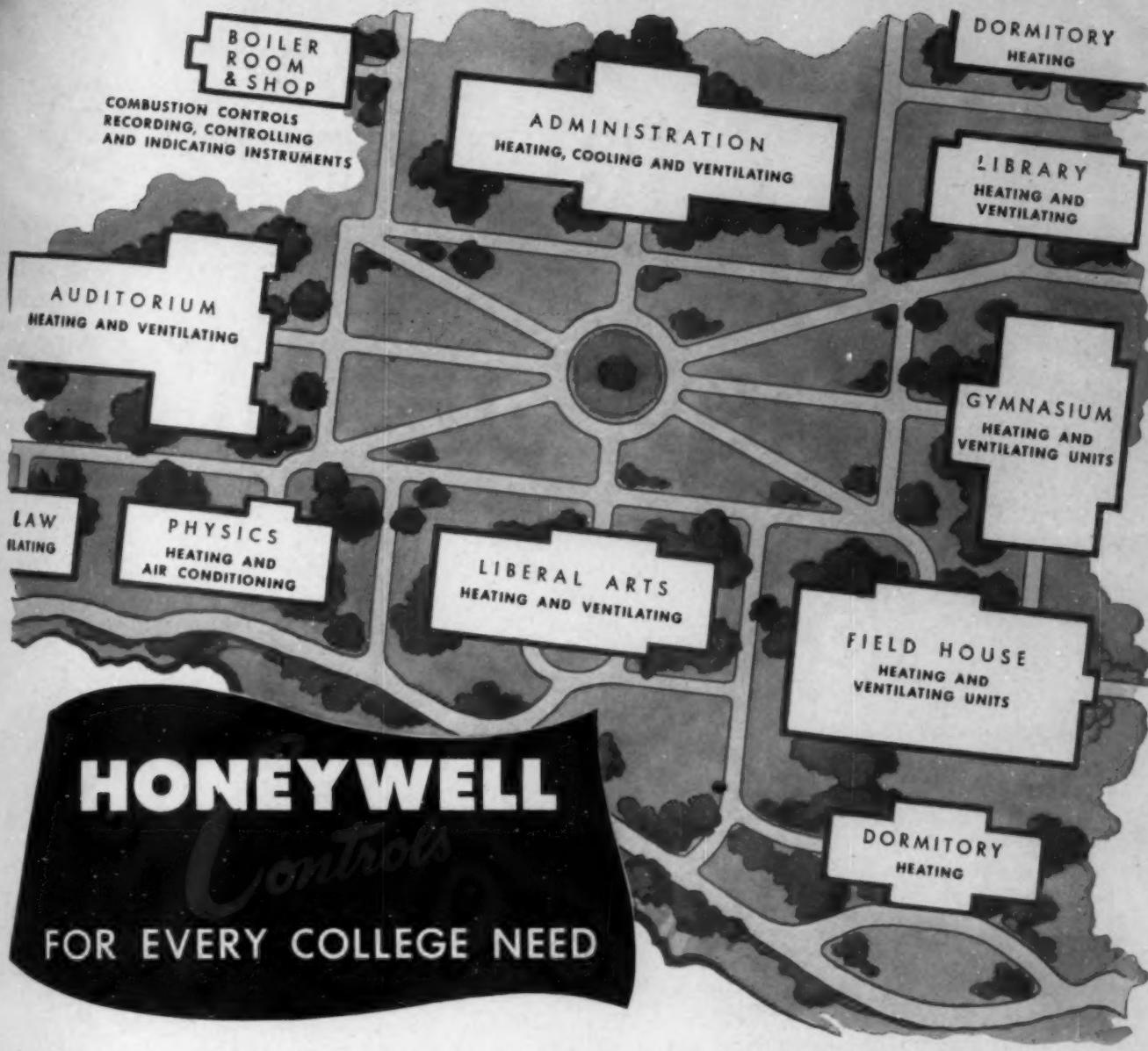


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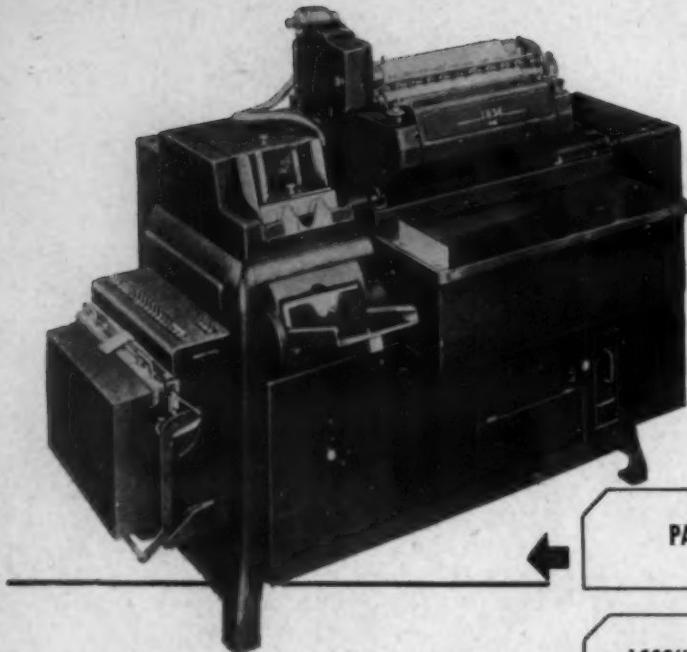
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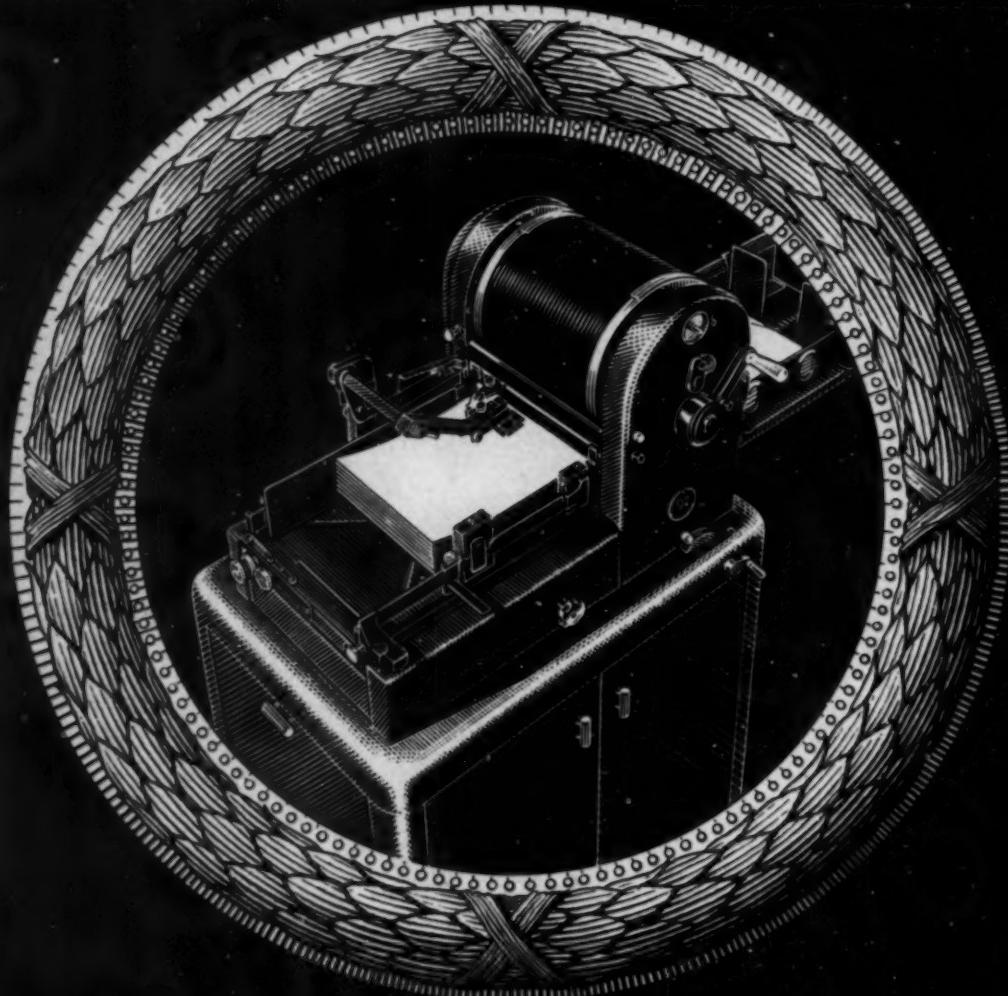
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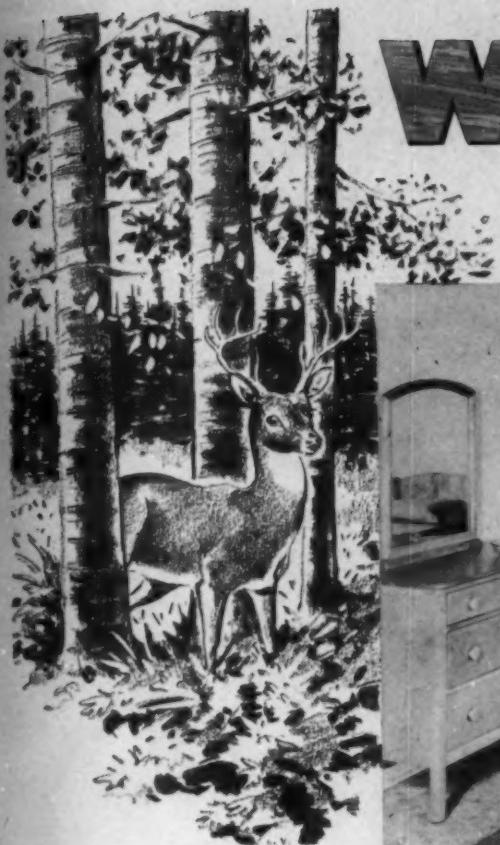


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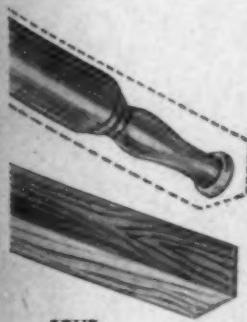


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COUNTER
FREEZER

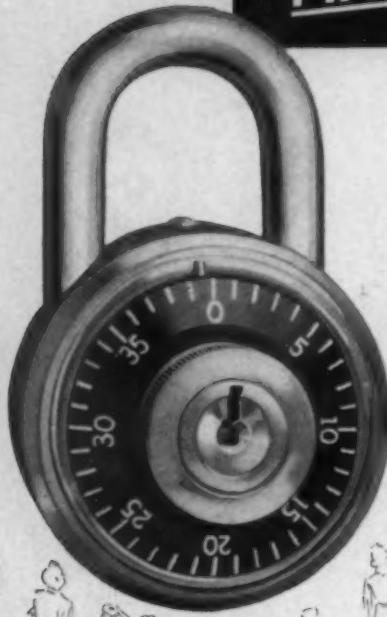
**AND WRITE US FOR
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Makers of Mills Master Ice Cream Freezers and Hardening Cabinets

the place
to look... FOR complete
PROTECTION



No. 68-264 Master-Keyed Self-Locking Shackle Lock

NATIONAL COMBINATION LOCKS

Here at NATIONAL LOCK you'll find rugged, long-lasting, economical combination shackle locks for *complete* locker security. The No. 68-264 has double steel construction with stainless steel outer case and $\frac{5}{16}$ inch steel shackles. Self-locking. Dial finished in black enamel. Numerals and gradations in white enamel. Special masterkey feature permits opening by authorized custodian if necessary.

No. 265 Self-Locking Shackle Lock

Popular for school and gymnasium. Has most of the same fine features as described above. Built to last. Simple to operate. Dial is locked against rotation when shackle is open. Combination is disturbed when shackle is closed. Dials to three numbers. Not masterkeyed.

Free sample plus complete information on National Locks will be sent to you upon request. Please give title and school affiliation. With initial order for 100 or more locks, you receive *free* a handsome leatherette binder with charts for complete lock record.

These are the locks exhibited at the National Education Association Convention.



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REST ASSURED—a Wayne Grandstand or Gymstand can be depended upon for safety. Their all-steel understructures are designed to carry full live load, plus impact and sway, with an ample factor of safety.

The Type "H", for example, is a safe, inexpensive, steel portable grandstand that meets almost every outdoor need. Note, in the photo below, that the construction permits base members to adjust themselves to uneven ground without straining the supporting members. Note, also, the strongly fabricated supporting structure and the comfortable seats and footrests.

Furnished in depths up to 15 rows and in 15 foot units, or as a continuous stand, the Type "H" presents a good appearance and is really economical. You can find out more about this grandstand by writing to:



"Wayne Stands for Safety"

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REPRESENTATIVES IN 42 CITIES
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Sloan Electrically Operated Flush Valve

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DEGREE



*Master of Economy

To replace an automatic flush tank which operates 24 hours per day with a Sloan Electrically Operated Flush Valve, set to operate only during business hours, will save as much as 100,000 gallons of water per year *per flush valve*. Multiply that saving by the number of flush valves used to replace tanks and you realize what Sloan economy can mean to you.

Add to this water saving the cost of the steam power to pump it, the manpower to control it, and

the k.w.h. required to distribute it, and you have a total that makes Sloan Flush Valves just good business.

Particularly is this true when Sloan Flush Valves require such low maintenance. Some records show this cost to be as low as $\frac{1}{4}$ th of 1-cent *per valve per year*. Maybe that's why more Sloan Flush Valves are sold than all other makes combined.

Write today for free literature



sloan *Flush valves*
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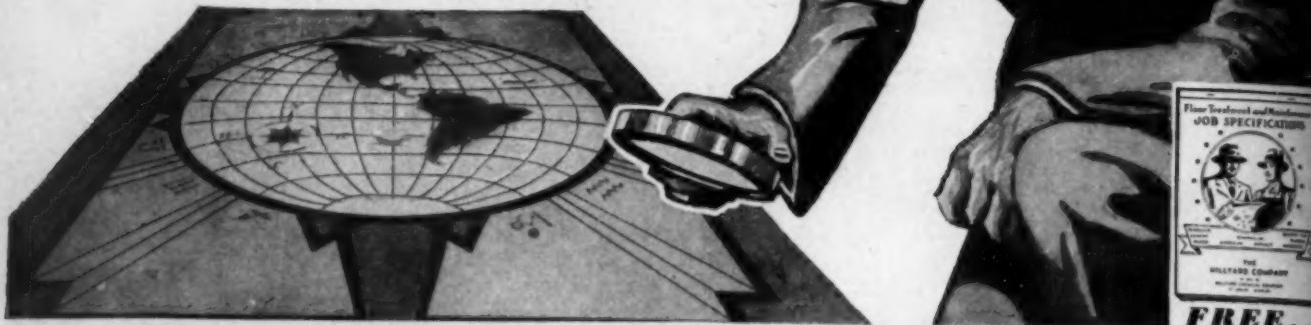
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★ Safe Super-SHINE-ALL cleans all types of floors and other surfaces . . . cuts labor costs, not being a soap it does not have to be rinsed.

★ Super HIL-BRITE self polishing ceranauba wax dries bright quickly, without discoloring, needs no buffing, rubbing or polishing.

★ Hillyard's Wood Primer is a penetrative seal, also a primer for subsequent coats of finish, waxes or dressings, it waterproofs wood floors. Hillyard products prevent breaking down of the cell structure through decay and rot caused by the absorption of water, grease, oil and dirt.

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Ask for a copy of Dr. Harmon's "LIGHT ON GROWING CHILDREN," reprinted from Architectural Record. On receipt of sketches showing dimensions and details of schoolroom, specifications will be furnished according to the Harmon Technique without cost or obligation.

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There are more **Clarin** steel folding chairs
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SIMMONS METAL FURNITURE



Attractive rooms like this one are favorites with students and alumni. For this furniture shows that school administrators are both progressive and practical. They have chosen SIMMONS metal furniture for many reasons . . . among them modern styling . . . matching ensemble pieces . . . beautiful, long-wearing finishes.

The furniture illustrated is from SIMMONS 142 line. Constructed of fire-resistant, durable metal—fashioned by master craftsmen—it assures economical long life. It is available in a wide variety of color combinations and grained finishes. The beds have famous Beautyrest mattresses, the world's most comfortable sleeping surface.

Let your SIMMONS distributor show you how easily you can have rooms like these in your dormitory.

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Desk F-142-6: Height 31½ in.; Top 34½ x 19 in. Modern type with square tubular legs and large drawer pulls.

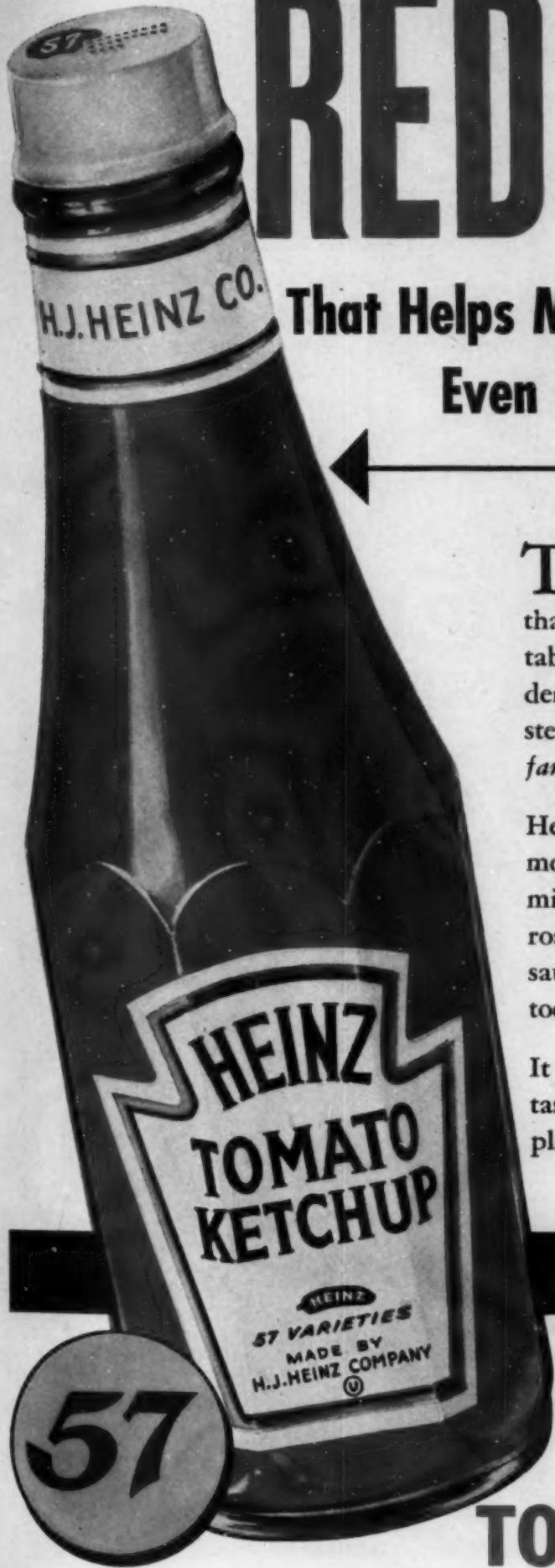


Desk F-142-10: Student's single Model. Height 31½ in.; Top 34½ x 21 in. Large pulls, open book shelf at right end.



Double Desk F-142-12: For two students. Has two open book shelves at end, two drawers on each side. Height 31½ in.; Top 42 x 32 in.

Kneehole Desk F-142-9 (Shown in room scene above). Has open book shelves at each end, 3 drawers with large pulls. Height: 31½ in.; Top 44½ x 21 in.



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**That Helps Make The Food You Serve
Even More Appetizing!**

To the good, sturdy food you serve, Heinz Tomato Ketchup adds appetizing magic that helps make the general fare of a college table more gratifying to the tastes of the students. That's why many college and university stewards find that it pays to keep the world-famous bottle within easy reach!

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LESS THAN 31 lbs.

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2000 ft. film capacity.
Coated optical elements.
Light output exceeds 200 lumens.
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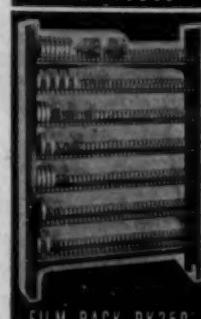
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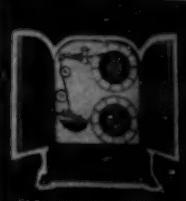
SAFE MODEL



PROJECTION TABLE T-134



SECTIONAL CAB. MM2



DON'T
LET
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DIE



NO. 1 REWIND BOARD



STRIP FILM CABINET MF 6

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"POSITIVE ROOM CONTROL"

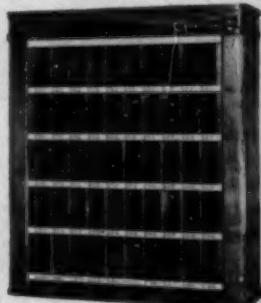


With a minimum of effort, the Information Rack-Room Rack combination keeps a constant, correct check of rooms, occupants.



INFORMATION RACK

Quick, easy, alphabetized reference file for telephone operators and supervisors. Name slips easily removed and simply revised. This sturdy rotating Information Rack has adjustments for various positions.



ROOM RACK

Room Rack, numbers consecutively arranged, is an excellent reference file. At a glance the information pertaining to room occupancy, rates & equipment is ascertained quickly.

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COLLEGE and UNIVERSITY BUSINESS



— A *Finnell* SCRUBBER-VACUUM DOES ALL...at Big Savings in Labor Costs!

Clean floors—always the mirror of good management—are even more revealing when the cleaning is done with a *Finnell Combination Scrubber-Vacuum*. Especially large-area floors. They tell a story of big savings effected in labor costs when cleaned with a *Combination Finnell*. The one illustrated above, for example, with one or two operators, does a cleaning job better in half the time it takes a crew of six to eight using separate equipment for scrubbing and picking up. This *Self-Propelled Finnell* is a complete cleaning unit *all in one*—it applies the cleanser, scrubs, rinses if required, and picks up. Has a cleaning capacity up to 8,750 sq. ft. per hour!

Finnell offers several *Combination Scrubber-Vacuum Machines*, and also a full line of *Portable*

Floor-Maintenance Machines. In fact, *Finnell* makes equipment for every type of floor care—wet scrubbing, dry scrubbing, dry cleaning, waxing, and polishing—and in sizes designed to fit specific needs. *Finnell* also makes a full line of *Cleansers* specially developed for the greater speed of mechanical scrubbing...and *Sealers, Waxes, and Accessories* for every need.

The nearby *Finnell Floor Specialist and Engineer* is readily available for free floor survey, demonstration, or consultation...and for training your maintenance operators in the proper use of *Finnell* equipment. Phone or write nearest *Finnell* branch or *Finnell System, Inc.*, 4403 East St., Elkhart, Ind. Canadian Office: Ottawa, Ont.



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Pioneers and Specialists in
FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES
IN ALL
PRINCIPAL
CITIES

TIME IS MONEY

Speed up your Clean-up!
and simplify
many other jobs



Here are some of the many McElroy "Labor-Savers" to cut your operating costs.

Room Service Truck puts everything at hand. Take fresh supplies from center (4-compartment tray on top shelf) and load soiled linen, trash, in bags on ends. Speed up operations as much as 30%.

Order McElroy products from your supply house or write for details. Shipments prompt, prices modest.

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Strongest and most useful all-purpose canvas trucks made.

Janitor Service Wagon has nothing to break or come apart.

Trucks with or without shelves for books, parcels, luggage, etc.

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withstand
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The long life (350 to 500 launderings) of McArthur School Towels makes them the lowest cost-per-use towels available. Two-ply, triple-twisted yarns used throughout McArthur Towels mean greater strength without added weight. Full tape rib construction, heavy tape salvage and color stripe woven down the side give additional strength and service. Complete information on an efficient plan for school towel distribution designed especially for your school will be sent on request. Write Geo. McArthur & Sons, Inc., Baraboo, Wisconsin.

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Costs only 3c doz.

to mark gym clothing, linens, towels, coats,
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The ONLY inexpensive
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This silver base
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...TO COURT!

THE CUSTOMER'S DIGNITY WAS HURT . . . but the store had worse wounds to lick. Their floors were slippery; shoppers constantly took spills. Many were minor, but serious injuries hit a two-a-week average. While claims piled up, the store's reputation dropped.



"Can we write our own insurance?" the store asked itself. "Insurance companies can't carry poor risks." So when the insurance men blamed the slippery floor polish, the store asked advice, "Call in Legge," was the answer.

Polished floors CAN be safe! A Legge floor expert proved that. Six months ago he introduced a floor maintenance program that gave the store bright-looking, Non-Slip floors. Not a single shopper has slipped since then!

ARE YOUR INSURANCE RATES TOO HIGH?

Your accident record determines your liability insurance rates. Slippery floors keep both high. That's one of the "hidden" costs of old-fashioned floor maintenance discussed in our free booklet, "Mr. Higby Learned About Floor Safety the Hard Way."

It reveals other drains on overhead; tells how a Legge expert engineers a scientific upkeep plan to your floors that saves life, limb and dollars.



IT'S YOURS WITHOUT OBLIGATION. For your copy, clip coupon to your letterhead and mail.

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Please send me your free book, "Mr. Higby Learned About Floor Safety the Hard Way."

Signed _____
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Only the Music of CARILLONIC BELLS

*was deemed worthy of this
inspiring Memorial*

In choosing a carillon for their beautiful Memorial Tower, the Alumni Tower Memorial Committee took special pains to compare bells and chimes throughout the country. They listened, judged, selected, by actual performance—and, in this thorough test, their choice was CARILLONIC BELLS.

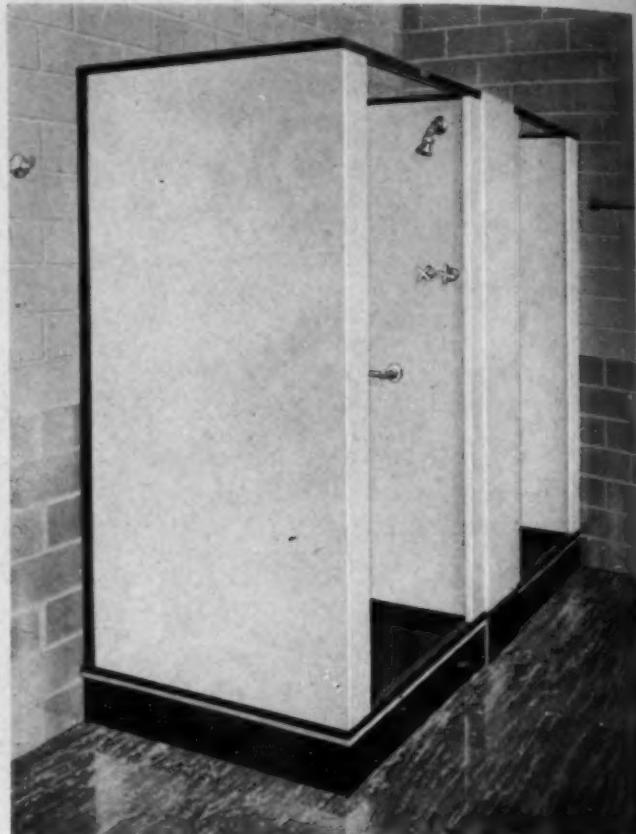
We suggest that, in choosing your carillon, you follow the same method. It is the method that has led so many hundreds of other colleges, churches and schools to gladden their communities with CARILLONIC BELLS. Do not choose by printed description, by blueprint, by sight—choose by sound. When you hear the mellow beauty of CARILLONIC BELLS, its brilliant clarity and true-toned accuracy, you will be more than satisfied that it surpasses all others.

And you will be delighted to know the further advantages of CARILLONIC BELLS—its moderate cost, its compactness, the fact that it can be installed in your tower without additional construction. For further details, please write to us, at Dept. COL-83.

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"CARILLONIC BELLS" • TOWER MUSIC SYSTEMS • ACOUSTIC CORRECTION UNITS
SOUND DISTRIBUTION SYSTEMS • CHURCH HEARING AIDS

There's Time Proven *Dependability* In These Cabinet Showers



A battery installation of Weisway Cabinet Showers

PRECISION-BUILT OF SERVICE-TESTED MATERIALS

It's the quality in hidden details that assures the years of maintenance-free service in Weisway Cabinet Showers. For example, the Foot-Grip, No-Slip floor of vitreous porcelain enamel is safe and sanitary. Weisways are leakproof and may be installed without special treatment of walls or floor in either new buildings or present structures.

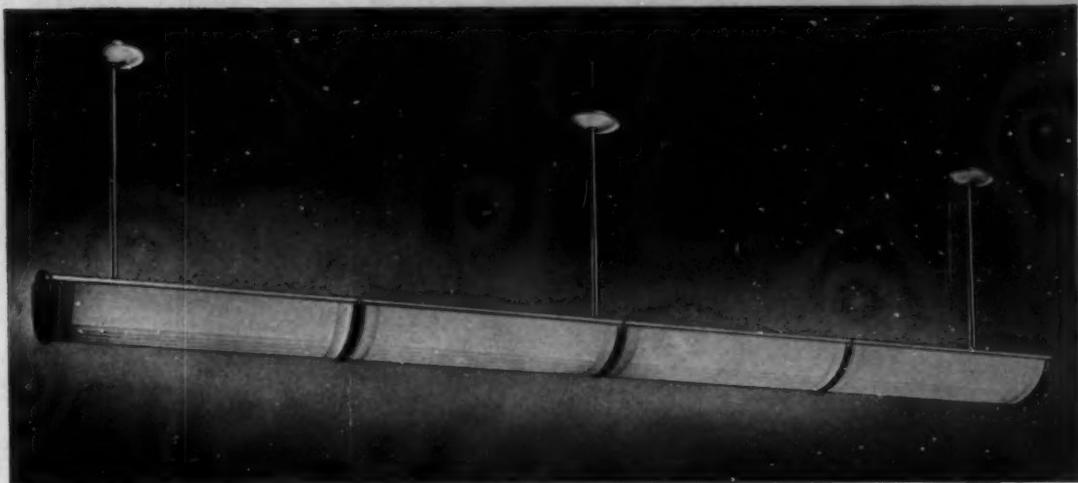
Weisway pioneered the cabinet shower idea; its reputation with architects and builders speaks well for its policy of making only quality products. This policy has been dominant in the company since its founding in 1876. There are sales and service representatives in key cities to help you with your shower installation problems. Write for full information.

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Weisway
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This is the Wakefield

STAR



. . . with the PLASKON Reflector that Insures
UNIFORM LIGHT DISTRIBUTION

Modern artificial lighting strives for two objectives: first, an even distribution of light intensity, and second, the elimination of brightness contrasts. The Star utilizes a molded translucent Plaskon reflector of such density that the lighted luminaire is of approximately the same brightness as the illuminated ceiling. When Star units are used in continuous runs, spaced in accordance with Wakefield engineering specifications, uniform distribution of light is secured, with no deep shadows or sharp contrasts and without distracting glare from the light source.

MINIMUM REQUIREMENTS

The following table sets up the minimum requirements:

CONTINUOUS ROW INSTALLATIONS

Spacing	Room Index A Large Rm. 48' x 96'		Room Index D Med. Room 24' x 38'		Room Index G Small Rm. 12' x 24'	
	No. Rows	Fcs.	No. Rows	Fcs.	No. Rows	Fcs.
4' 0"	12 of 22*	79	6 of 10*	58	3 of 5*	43
4' 4"	11 of 22	72				
4' 9"	10 of 22	66	5 of 10	48		
5' 3"	9 of 22	59				
6' 0"	8 of 22	52	4 of 10	38	2 of 5	29
6' 9"	7 of 22	46				
8' 0"	6 of 22	39	3 of 10	23		

* Units per row.

Easily Installed and Maintained—Each 4' Star section utilizes two 40W fluorescent lamps which are accessible from the top of the reflector. The Plaskon reflectors and end caps are light in weight, non-electrostatic, non-shatterable, non-combustible and are readily slid in and out for maintenance purposes without disassembly of the line. All visible metal parts are finished in satin aluminum.

The Star may be used singly in corridors or small rooms, or mounted in continuous rows. Continuous runs may be obtained from jobbers' stocks of bodies, reflectors, stems and end caps. Single units have twin suspension. Detailed installation instructions accompany each assembly.

Photometric Chart

Impartial tests by electrical testing laboratories to determine the candlepower efficiency of THE STAR in various planes have been plotted as a curve which demonstrates what may be expected from this unit. Data showing the estimated footcandles in service on various spacing arrangements are available. For further details, consult Sweet's File or write to

THE F. W. WAKEFIELD BRASS COMPANY
Vermilion, Ohio.

Wakefield Over-ALL Lighting

FOR OFFICE • DRAFTING ROOM • STORE AND SCHOOL



THE GRENADIER II



THE GRENADIER IV



THE COMMODORE



THE DIPLOMAT



PARK CHALLENGER FOR LOW-COST FLEXIBLE MOWING

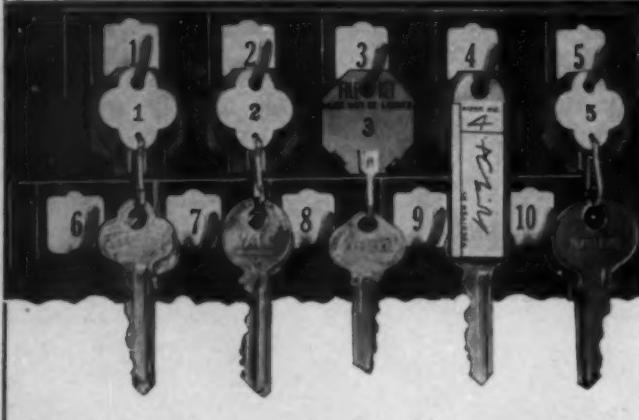
The mobility, the speed of operation, the ease of handling, the ability to eliminate hand trimming and the low operating cost make the PARK CHALLENGER a mowing unit to be desired by every progressive executive responsible for turfed areas.



The PARK CHALLENGER (three Roseman Roller-Drive Mowers mounted on the new Ford Tractor or the Ford Tractor-Ferguson system) mows a swath 7 ft. wide. The unit can be attached or detached in a matter of minutes. The fingertip hydraulic control raises the mowers instantly to a maximum height of 10 inches. Write for complete information.

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TRACTOR MOWER CO.
CRAWFORD, CENTRAL & RIDGE RD.
EVANSTON, ILLINOIS

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1 TelKee is a tried and proven Visible Key-Filing—Key-FINDING System.

2 Whether there are a few keys or thousands of keys—TelKee is simple and effective.

3 It is the perfect system for knowing your keys—knowing where they are when you want to use them.

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Reg. U.S. Pat. Off.

Visible Key Control
SYSTEM
is the Answer!

Write for Circular.

P. O. MOORE, INC.
298 Fourth Ave.
New York 10, N. Y.

4 TelKee retains a Reserve - Pattern key—never loaned. Tells you to whom other keys have been loaned.

5 Your keys are identified only by the special TelKee Cross Index—Positive Control.

6 New instruction booklet based on 16 years' experience makes it easy to set up and operate.

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BUILT BETTER, STRONGER

The most popular folding tables for school and college use . . . provide 25% greater seating capacity without knee interference . . . store in 300% less space . . . rigid when set up.

FOLD-O-LEG Tables are good looking. Top: satin finish brown tempered Masonite, unmarred by bolts, rivets or nails. Folding Legs: Sturdy, welded tubular steel, finished in brown enamel. FOLD-O-LEG Tables last longer because they are stronger.

Prompt Delivery . . . Write for descriptive folder.

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YOUR
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HEROES

BRONZE TABLETS
by
NEWMAN



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in Colors**

Write for our illustrated catalog, without obligation. Include desired inscriptions for immediate price quotation. Catalog, recommendations, estimates sent gladly.

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NEWMAN HAND-CHASED BRONZE . . . "the metal of countless tomorrow's" . . . in honor rolls, bas-relief portrait memorials and award plaques has been famous for quality internationally since 1882.

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YEARS
YOUNG

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Dept. 34, Cincinnati 3, Ohio



Everybody's Pointing To Hotpoint



"Hotpoint Equipment Saved \$2760 Last Year"



*John Barnes, Head
Chef, Read House,
Chattanooga*



Read House Kitchen, showing modern Hotpoint equipment

**Chattanooga's Read House makes
spectacular savings in meat shrinkage
and fuel with Hotpoint kitchen**

SPEED and better handling of food were sought by the Read House, Chattanooga, when it electrified both its main and coffee shop kitchens last January. But the Hotpoint Electric Cooking Equipment installed did better than that. Steadily each month the Read House has been saving a total of \$230—divided between fuel cost and reduction in meat shrinkage—an overall saving of \$2760 for 12 months.

Schools find that Hotpoint Commercial Cooking Equipment not only means better, more nutritious meals, but also pays for itself many times over. *Discover* for yourself how Hotpoint brings you 7 big savings every day of the week!

START PLANNING A HOTPOINT KITCHEN TODAY!

Hotpoint

HOTPOINT INC. A GENERAL ELECTRIC AFFILIATE

**Save 7 Ways
Every Day With Hotpoint!**

1. **Saves Food Flavors** — conserves maximum of natural juices, gives uniform results.
2. **Cuts Food Costs** — reduces meat shrinkage, saves up to 60% on consumption of fat.
3. **Cuts Labor Costs** — saves hours for cook, saves on cleaning and scouring, too.
4. **Lasts Twice as Long** — Independent study shows depreciation rate is cut in half.
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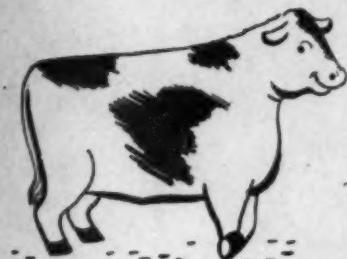
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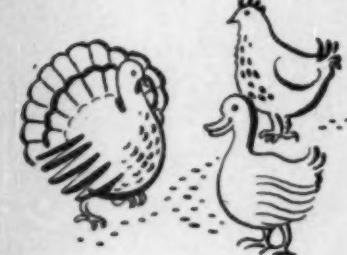
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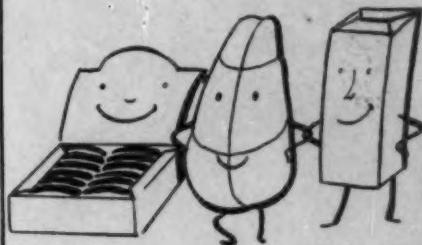


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WHAT'S NEW

MARCH, 1948

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 40. Just circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your request to the manufacturer. If you wish other product information, just write us and we shall make every effort to supply it.

Da-Lite Model C Floor Stand

The new Da-Lite Model C Floor Stand for the Da-Lite Model C Screen is de-



signed for quick placement on platform, assembly hall rostrum or stage without tripod or hanging the screen from wall or ceiling. The Model C Floor Stand can be assembled in less than five minutes and one person can erect even a 9 by 12 foot screen with ease and with no risk of injury to screen or operator.

The stand is completely collapsible and easily portable. It is made of light weight aluminum, weighing only 18 pounds, with the longest piece only 5 feet. After setting the Model C Screen in the stand case brackets, the hanger loop is hooked on the extension rod and the screen is raised to first, then second position, ready for projection.

The stand is available in sizes to accommodate all Model C rectangular screens 6 by 8 feet to 9 by 12 feet and all square sizes up to and including 10 feet. Da-Lite Screen Co., Inc., Dept. CUB, 2711 N. Pulaski Rd., Chicago 39. (Key No. 882)

Seco-Superex Fountain Line

Seco-Superex soda fountain units and related equipment and accessories are now available to institutions throughout the country. The new line offers advanced mechanical and functional design which has been field tested for a period of 2½ years. Outstanding features of the line include all refrigeration compressors self-contained in each unit; dispensing equipment with self-contained cooler carbonator with large capacity; inter-

changeable units for planning any layout with or without food; custom-built, heavy duty construction with one-piece seamless stainless steel tops; dry refrigerator system and narrower fountain to reduce reach and fatigue. Seco Company, Inc., Dept. CUB, 5206 S. 38th St., St. Louis 16, Mo. (Key No. 883)

16 mm. Camera

Schools or colleges wishing to make their own motion pictures for teaching or entertainment will be interested in the new Filmo Specialist, semi-professional 16 mm. motion picture camera developed by Bell & Howell. The new camera has professional shift-over focusing, four-lens turret, Viewfinder Parallax adjustment, positive Viewfinders, light-baffled shutter, selective, 3 way power and 400 foot film capacity. It has 7 operating speeds ranging from 8 to 64 frames per second, complete film protection, rewind knob for back-winding the film within the camera, automatic relative exposure indicator and continuous operation lock. A carrying case for the new camera and its accessories is available as is a semi-professional tripod with case. Bell & Howell Co., Dept. CUB, 7100 McCormick Rd., Chicago 45. (Key No. 884)

Westinghouse Water Coolers

Westinghouse is announcing a new line of seven hermetically-sealed water coolers designed to meet every need. They will feature automatic pressure regulator for maintaining constant stream height regardless of variations of local water pressure, new type orifice on bubbler to prevent squirting and malicious water damage; foot pedal operation for convenience and sanitation and removable front panel for easier access to all mechanical parts.

The coolers will be finished in blue-gray enamel and except for one china top model, all units will have 1 piece, splash-proof tops of stainless steel. Provision is made on the new models for adding a chrome plated glass filler where desired. The new line varies from one 3 gallon bottle type unit to pressure coolers varying from 3½ to 22½ gallon capacity. Westinghouse Electric Corp., Dept. CUB, 306 Fourth Ave., Pittsburgh 30, Pa. (Key No. 885)

Program Timer

A new low-priced program timer, which can be set to sound a bell or other signal at 15 minute intervals, has been announced. Known as the Zenith P-15-24, the unit can be automatically set in a moment by turning the minute hand, as with an ordinary clock, and circuit closure will give signal of from 2 to 60 seconds duration as desired. It can be used for any timing needs. Zenith Electric Co., Dept. CUB, 152 W. Walton St., Chicago 10. (Key No. 886)

Salfrann "400" Dishwasher

The new Salfrann "400" dishwasher is designed to handle 34 full racks of dishes per hour for washing, rinsing and air drying. The rack of dirty dishes, glasses or silverware is placed on the hydraulic lift track and lowered automatically into the cleaning chamber. A turn of the electric switch starts the spray of cleansing detergent solution, the rinse lever releases a sterilization spray of hot rinse water and the turn of a handle brings the clean dishes to table level.

The machine is designed to clean dishes, glasses and silverware with ease and speed and be easily cleaned itself. Drains are carried off through a direct sewer connection, strainer trays in the wash compartment catch and hold large particles, a removable screen protects the pump intake and the spray tubes are easily removed for cleaning. The flat top of the hydraulic lift encloses the cleansing unit from above during washing and rinsing and serves also as an additional service



table top between washing operations. Thermo Cuber Co., Inc., Dept. CUB, 3260 W. Grand Ave., Chicago 51. (Key No. 887)

Sonomaster Record Player

The new Sonomaster record player is a completely self-contained instrument, with its own amplifier and speaker, housed in an attractive, leather-bound carrying case. It features the new GE variable reluctance high-fidelity pick-up which is unaffected by changes in temperature and humidity and is equipped with a natural sapphire stylus which is soft-spring mounted and operates with only one ounce pressure. The pickup is designed for clean response and elimination of most of the noise caused by roughness or scratches on the record surface. The new unit accommodates records up to 16 inches in diameter at either 33½ or 78 RPM.

The new 10 inch heavy duty permanent magnet dynamic speaker has been especially designed for the Sonomaster and offers exceptional fidelity of performance on both speech and music. The unit is adaptable to the pickup and amplification of special FM programs and a special optional FM Tuner is an accessory for this purpose. The instrument operates on 50 cycle, 110-120-130 volt AC. The complete unit weighs only 40 pounds and is 22½ inches long, 16½ inches wide and 11 inches high. It is manufactured by the Sandwich-Bowen Corporation for Victor Animatograph Corp., Dept. CUB, Davenport, Iowa. (Key No. 888)

Vestal Wax Remover

Old wax can be removed from floors without injury or damage to linoleum, asphalt tile, rubber tile, terrazzo, cement or wood with the new Vestal Wax Remover. The product also cleans the surface, leaving a slight, protective film. It is available in containers ranging from 5 to 55 gallons. Vestal, Inc., Dept. CUB, 4963 Manchester Ave., St. Louis 10, Mo. (Key No. 889)

Paging and Intercom System



The new IM-3 paging and intercom system has been developed by the Stromberg-Carlson Company for quick communication between selected areas and a control center where the return message is private. The master unit can direct outgoing messages to any one or all of three areas and controls the volume both

ways. A key on the telephone base controls the transmission and reception of messages. Incoming messages are sent by speaking directly into any one of the reproducers located in the areas addressed.

Power for the master unit is derived from a remotely located amplifier which it controls. The unit is compact, built into a telephone instrument base and handset. It may be connected with any number, size or type of loud-speakers to cover large or small areas. Control is provided for three independent speaker circuits and an all-call position. Stromberg-Carlson Co., Dept. CUB, Rochester 3, N. Y. (Key No. 890)

Paratex Wall Coating

Paratex Wall Coating is a rubber base paint which is designed for use on all types of walls and ceilings with no priming coat required. It is a self-sealing flat finish which is easily applied and gives a smooth surface over painted or unpainted areas, over wall board, brick, concrete, plaster, paints or wallpaper. It may be applied by brush, roller or spray and covers checks, crack lines or patch marks. It is alkali-proof and gives a smooth, soft-toned, uniform finish on walls or woodwork. Truscon Laboratories, Dept. CUB, Caniff & G.T.R.R., Detroit 11, Mich. (Key No. 891)

Sperzel Toilet Seat

A new self sustaining hinge that exerts a gripping action on both toilet seat and cover makes it impossible for the new Sperzel toilet seat to slam down on the bowl. Either the cover or the seat, or both together, can be raised to any desired position where they will remain until pushed down. The new seat is made of solid plastic in a number of types. Sperzel Co., Dept. CUB, 123 Fourteenth Ave. S., Minneapolis 4, Minn. (Key No. 892)

Fairchild Console Recorder

The new Fairchild console recorder, Unit 539, is designed for recording on discs up to 17½ inches in size. It is suitable for instruction in speech, language or music, for synchronizing of sound-on-disc with film and can be used for AM and FM broadcasting.

The console unit is mounted in an attractive wood cabinet and is complete with cables and connectors for attachment to an amplifier-equalizer for recording and direct playback. It is also available in a sturdy trunk for those desiring a portable unit. Fairchild Camera and Instrument Corp., Dept. CUB, 86-06 Van Wyck Blvd., Jamaica 1, N. Y. (Key No. 893)

Mealpack Tray Cart



The new Mealpack Tray Cart, Model 20, provides facilities for conveying 20 complete meals. Entrees, packed and vacuum-sealed in individual Mealpack containers which keep the food hot until opened, are placed on each tray and the trays slipped into position in the cart. Hot and chilled beverages and soups are carried in removable stainless steel vacuum type jugs built into the cart. Chilled foods are carried in a built-in compartment which is especially insulated for the purpose and which can be easily removed for cleaning.

The cart would serve well in colleges for feeding athletic teams during training, for feeding patients in the infirmary and for special feeding problems. Also, use of the carts would make it possible to set up a central food purchasing and preparation kitchen which would effect savings in cost of food and labor, the meals being transported in the carts on a contract basis to fraternity houses and dormitories.

The new tray cart is 52 inches long and 27 inches wide, providing a compact serving unit constructed of light weight duraluminum and stainless steel, with large rubber tired casters for easy, quiet, efficient transportation of meals. Mealpack Corporation of America, Dept. CUB 152 W. 42nd St., New York 19. (Key No. 894)

Skid-less Floor Enamel

The new Rubber-Coat Skid-less Floor Enamel is a 50 per cent rubber-based, one hour drying enamel. Designed especially for heavy traffic conditions found in schools and other institutions, the new enamel is resistant to accidental spillage of alcohol, gasoline and most chemicals, is skid resistant, resists wear due to cleaning and costs less than one cent per square foot. The product is supplied in 8 attractive colors plus black and white. The Wilbur & Williams Co., Dept. CUB, Greenleaf and Leon Sts., Boston 15, Mass. (Key No. 895)

PRODUCT LITERATURE

• "Cloth Fabric Identification" is the title of a new catalog issued by Applegate Chemical Co., 5630 Harper Ave., Chicago 37. The full line of indelible inks and linen markers manufactured by this company is listed together with information on the Applegate system of identification. (Key No. 896)

• "Life Photographic Exhibitions," based on the history of Western culture articles appearing in Life magazine, are described in a folder issued by Life Photographic Exhibition, 9 Rockefeller Plaza, New York 20. This educational project for schools and colleges is fully described in the folder which gives details of the exhibits which are composed of enlarged photographs with text. The new sets are produced by a gravure process, each subject being covered by from 24 to 30 panels. The new process makes it possible to produce the units at a nominal price. As a result they are being offered to educational institutions as a permanent exhibition and the first three units available in the new form cover "The Medieval World," "The Age of Enlightenment" and "Venice." (Key No. 897)

• Mouth-watering color photographs indicate the results to be obtained with the "New Recipes for Mass Baking" offered in a booklet issued by the Doughnut Corporation of America, 393 Seventh Ave., New York 1. Information on the various Downyflake Baking Mixes and recipes for many types of baked goods which can be made with them should prove of interest to those concerned with feeding problems. (Key No. 898)

• "Sound . . . A Modern Control System" is the title of a new booklet issued by Executone, Inc., 415 Lexington Ave., New York 17. The complete line of voice-paging and music systems manufactured by this company is described together with information on the value of these systems in quickly locating personnel, relieving switchboard congestion, broadcasting general announcements or programs and other helpful data. (Key No. 899)

• The "New Electric-Aire Automatic Hand Dryer" is described and illustrated in a folder recently issued by Electric-Aire Engineering Corp., 209 W. Jackson Blvd., Chicago 6. Suggestions for the uses of the new dryer and illustrative examples make up the folder. (Key No. 900)

• The full line of National Cash Registers, including the most recent developments, is illustrated and described in a folder recently issued by the National Cash Register Co., Dayton, Ohio. (Key No. 901)

• The complete 120 page Catalog Supplement No. 234 of "Furniture and Equipment" supplied by Clark Linen & Equipment Co., 303 W. Monroe St., Chicago 6, is now available. The catalog is fully indexed and covers furniture, lamps, linens, polishes, rubber, tables, towels, trucks and miscellaneous equipment and supplies. (Key No. 902)

• Information on L.K.R., the waterproofing and rust prevention chemical for metal, cement, brick, stone, cinder blocks and wood, is given in a folder and a bulletin issued by L.K.R. Chemical Products Corp., 3105 Park Ave., Detroit 1, Mich. The history of this product, which is applied by brushing to condition walls, floors, foundations and other parts of the building against water and rust, is outlined in the bulletin and full data on its use are included in the folder. (Key No. 903)

• Interesting data on the subject of lighting are given in Catalog No. 48, "Over-All Lighting by Wakefield," issued by The F. W. Wakefield Brass Co., Vermilion, Ohio. The catalog begins with a discussion of "What Wakefield Over-All Lighting Means" and this is followed with descriptive information on the various lighting units developed by this company. Blue prints give complete technical information on the units and specifications and computations make this 32 page catalog a helpful reference volume for those concerns with lighting, especially in classrooms. (Key No. 904)

• Young America Films, Inc., 18 E. 41st St., New York 17, is offering a new idea in presenting slidefilms to the educational field. Their YAF Package Plan offers a special YAF model of the Viewlex all-purpose projector with a wide choice of slidefilms and slides from the lists carried by this company. It will be appreciated by educators that this plan will permit the accumulation of a library of slidefilms at the same time as the projector is purchased. (Key No. 905)

• All of the models in the line of inter-communication systems developed by the Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, are illustrated and described in a 12 page catalog recently issued by this company. The low cost standard system which provides standard master cabinets with matched sub-stations and incorporates the "Silent Feature" developed by this manufacturer wherein noise at the sub-stations are cut out even though the sub-stations can originate calls is fully described as are the de luxe and special de luxe systems which offer additional advantages in inter-communication. All models made by this company are included in the catalog. (Key No. 906)

• "Noise Reduction" for schools with repainted Gold Bond Acoustifibre is described in a folder issued by National Gypsum Co., Buffalo 2, N. Y. Quick facts about this product, description, sound absorption data and illustrations of its use are included. (Key No. 907)

• "Pyrene Water Type Fire Extinguishers" are described in a new circular issued by the Pyrene Mfg. Co., 560 Belmont Ave., Newark 8, N. J. The cartridge-operated 2½ gallon Pyrene water type and Pyrene anti-freeze fire extinguishers, which are easily maintained by simple examination and by weighing the gas cartridge, are illustrated and described. (Key No. 908)

SUPPLIERS' PLANT NEWS

• D. Appleton-Century Company, Inc., 35 W. 32nd St., New York 1, announces the merger with F. S. Crofts & Co., Inc., to form the new firm of Appleton-Century-Crofts, Inc. The new company will maintain the offices heretofore occupied by the two former companies but eventually will be housed in one building. (Key No. 909)

• The Jackson Dishwashing Co., 3703 E. 93rd St., Cleveland 5, Ohio, manufacturer of dishwashing machines, announces the opening of a sales and service office to serve the Illinois territory at 506 S. Wabash Ave., Chicago 5. (Key No. 910)

• Klenzade Products, Inc., Beloit, Wis., manufacturers of chemical specialties for cleaning and sanitation, has opened a new branch office and warehouse, to be known as Klenzade Western Co., in the Chamber of Commerce Bldg., Denver, Colo. The new branch is designed to serve the southwestern area of the country. (Key No. 911)

• The March of Time, 369 Lexington Ave., New York 17, announces that parts of the March of Time Forum Edition, previously available only on a 3 year rental basis, will now be sold outright. The films were especially edited for school, college and discussion groups and number 35 subjects. (Key No. 912)

• Pittsburgh Corning Corp., 632 Duquesne Way, Pittsburgh 30, Pa., announces the opening of a new plant at Sedalia, Mo., for the production of glass blocks. (Key No. 913)

• The Weston Electrical Instrument Corp., Newark, N. J., manufacturer of electrical instruments, announces the opening of a new engineering and administration building on the plant grounds. The new building was erected to permit the necessary expansion of engineering and administration facilities and release space required for manufacturing. (Key No. 914)

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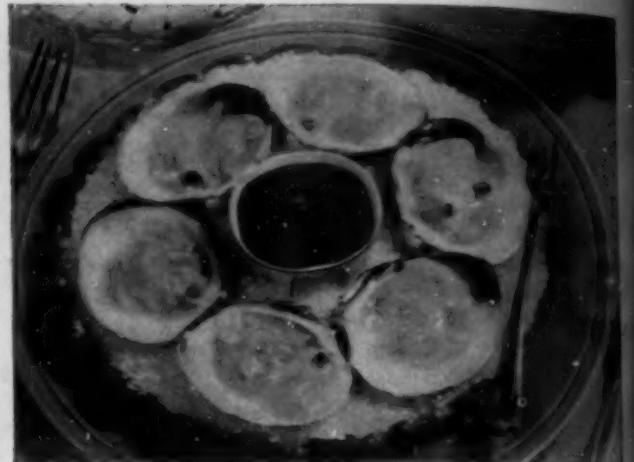
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